

Education in a Competitive and Globalizing World

# Developing Teacher Competences

Key Issues and Values



*Ilshat Gafurov • Aydar Kalimullin  
Roza Valeeva • Nick Rushby*  
*Editors*

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*Preface*

## **VALUE ORIENTATIONS AND COMPETENCES OF FUTURE TEACHERS**

Over the last few decades, the importance of personal values and teachers' beliefs is being more widely recognised. Although it is common knowledge that values and beliefs of teachers have an impact on the children's development of a moral stand and a civic position, current studies also substantiate its influence on the quality and effectiveness of teaching.

These changes have affected the education systems worldwide, including the aspects of teaching. Professional competencies of teachers have recently been modified. This has triggered the transformation of teachers' values. Specifically, teachers become the holders of material and spiritual culture of society and universal human values. Therefore, there is a need for the transformation of the system of teachers' values based on comprehensive pedagogical, psychological, sociological and cultural research.

Accordingly, the studies on the teachers' values and beliefs are of great political and educational importance for every country. Firstly, values and beliefs capture dominant and conflicting national values, as well as demonstrating the state's achievements and missteps towards the education of a future generation of citizens.

Since the 1980s, most well-known theories of teacher education have tended to adopt different constructivist teaching methods, specifically to emphasise the multifaceted aspects of teaching and learning. It was commonly believed that values are in line with moral behaviour and the teachers' position, but most importantly, that values are an essential part of the curriculum, state educational standards, innovations, school culture, and teacher-student and teacher-teacher relations. Accordingly, pre-service teachers learn key guiding principles and these principles provide a basis for their future development as a teacher and for their teaching practice. This became the main motivation for the transformation of teacher training programmes, aimed at development of the appropriate teachers' views on what they teach, teaching methods, and teaching outcomes.

Another relevant issue is the problem of the teachers' moral values within the national and cultural context. In particular, there is little research on teachers' values and beliefs from the perspective of the gender, religious, multicultural and racial aspects, as well as in the context of teaching students with special needs, including physical, intellectual, sensory, and psychiatric problems.

There are a rather limited number of the hotly-debated research questions are presented in the works of the leading Russian and foreign researchers in the field of teacher education who participated in the Fifth International Forum on Teacher Education held on 29-31 May, 2019 in Kazan Federal University (IFTE-2019) (<http://ifte.kpfu.ru/en/home-page/>). IFTE-2019 was hosted in cooperation with Russian Educational Research Association (RERA), the Educational Studies Association of Ireland, the International Janusz Korczak Association, with support from the World Education Research Association (WERA), the International Association of Educators (INASED) and the Association for Teacher Education in Europe (ATEE). Over 600 delegates from 132 Russian and 74 overseas universities and research centres participated in the Forum (including scientists and practitioners from Brazil, Bulgaria, Canada, China, Cuba, Germany, India, Italy, Kazakhstan, Namibia, Poland, Portugal, Serbia, Slovenia, Sweden, Spain, Trinidad and Tobago, Turkey, the UK, and the USA. The International Forum on Teacher Education is one of the biggest

platforms for discussing various educational trends and reforms in the field of teacher education. Over the years Forum has grown to be one of the most influential conferences in the field of education in Eastern Europe and post-Soviet countries. During IFTE-2019 three International sub-conferences were held: “Continuing teacher education: new concepts and technologies”, “Early-career teachers: induction and professional development” and “Research-based teacher education”, with 580 papers on different educational themes. Researchers shared their views and research results on the issues of modernization and development of the content of teacher education. They discussed questions related to values and priorities within the field of modern teacher education, on the modernization processes and contents of teacher education including the requirements of a competency-based approach. Key issues of teachers’ professional development within this and other essential topics related to teacher education were also touched upon at the symposiums and round tables.

It is not by chance that Kazan Federal University chose the issues of teachers’ values and their professionalism as the main topic of the forum. In accordance with various research theories, including our own studies, we generated a list of the requirements needed to transform teacher education. These are part of the new teacher training programmes, which we established in the last few years. Essentially, our approach for the development of teachers’ values and beliefs is based on the following principles, which are incorporated into our teacher training programmes:

1) Beginning pre-service teachers often have established beliefs about themselves as future teachers. These beliefs are frequently shaped by the personal school experience; students imitate specific teacher behaviour or conversely, aspire to teach in their own way.

2) A majority of students believe that they can become good teachers and they already have the necessary skills and personality traits to be a successful educator.

3) Beginning student teachers have a more progressive attitude towards teaching than practising teachers with traditional perspectives. Students are more likely to use communicative technologies, motivate learners and

build trust-based relationship with children. Nevertheless, students' beliefs about teaching career are quite contradictory and rest upon the inconsistent imperatives of pedagogical theories. The most common contradiction, for instance, is between self-regulated learning and the consistency of assessment measures. Consequently, the period of teacher training should be a time of open dialogue, aimed at elimination of the contradictions. If not, students may be confused and not ready for a teaching job. For this reason, we regularly conduct a set of internal evaluations. Importantly, they showed that only 65% of students consider a teaching career at school. We have not found a correlation between declined or enhanced interest to the teaching profession and a particular year of study. However, a survey, which targeted the fourth and fifth-year student teachers who do not consider teaching at school, showed that 78% of them made this decision while studying at university. It also demonstrated that 45% of the surveyed students have relatives or parents who are currently teachers. Another study with the main focus on practising teachers revealed that 30% of these teachers indicated they had made the wrong career choice.

4) Research also showed that the young teachers' established beliefs about the subject affect the way they teach it. If the discipline is believed to be a series of axiomatic facts, then the teacher would choose a directive instruction. If the discipline is thought of as the constantly changing body of knowledge, then the teacher would use communicative technologies, actively engaging students into the learning process.

5) The most important outcome for educational leaders is for teachers to implement only those innovations that are in accord with their concept of "correct" teaching. This means that any attempts by managers to change teaching practices would meet the resistance of a teacher community if those changes are not in line with their beliefs.

Beliefs are formed as a result of complex repeated life experiences. Therefore, it is impossible to form and transform pre-service teachers' beliefs within the context of specific disciplines. Our evaluation results argue that the united university team has a major role in the formation of student teachers' beliefs about professional activity, as well as the

importance of the consistent and coherent curriculum. Higher education institutions face substantial challenges if different organisation units are involved in teacher training programmes, for example, if the different departments are independently responsible for courses and instructional technology. It is necessary to maintain the persistent ideological integration of teachers and the perpetual articulation of their mutual ideas and tasks.

The transformation of students' ordinary beliefs, the formation of critical thinking and scientifically-based thinking are not assumed to be a consequential process. It would not happen per se after students acquire the theoretical material and the practical part of learning. The goal-oriented team of educators, together with the main idea generated during educational programmes' development, should play a role in this process.

Our ultimate goal is to develop the critical thinking and research culture of graduating students. They should be responsible for their actions, realise the consequences and justify their decisions. These competencies, in turn, should be based on the essential values and beliefs of student teachers. Although, according to research literature, beliefs affect the teaching practice, they are also highly stable and resistant to change. The content of teacher education and these conclusions lead us to the main aim of teacher training programmes, which is the transformation of teachers' beliefs from the very beginning of their education. These are the future research perspectives, hence the need for Russian scholars and pedagogical practices to be actively involved in this research area.

Sixteen papers presented at the Forum are included into this book. The authors of the papers issue represent a variety of positions and address a number of the questions raised in the high quality debate. The evidence they present emanates from different nations and different universities.

Appearing first in this book's line up is Future schoolteachers' preconceptions and their transformation: training program impact on epistemological beliefs, by Timirkhan B. Alishev, Johannes Dammerer, Oksana V. Polyakova. Their research study revolves around the set of students' preconceptions at the beginning of their study and the later change of these preconceptions due to different stressful situations. They present the results of the in-depth interviews conducted by the authors

among 28 university leavers from Institute of Psychology and Education (Kazan Federal University) and University of Education of Lower Austria focusing on the factors that influenced the formation of preconceptions before entering the University, and the connection between education process provided by the University and the final framework of epistemological beliefs that future schoolteachers have when they come to school.

The second chapter Creative competence of future teachers, is by Dinar V. Ivanov, Valeriya A. Stepashkina and Vera K. Vlasova from Kazan Federal University. They regard the value of creativity formation in future teachers relating to the dynamics of teachers mobility, and willingness for pedagogical activities implementation in rapidly transforming conditions of Russian education. In this article the authors discuss the results of the exploratory study of personal characteristics of teachers' creative competence. 54 future primary school teachers answered the questions of the Torrance tests of creative thinking and the Guilford test of creative thinking. The authors came to conclusion that future teachers participating in creative educational activity during their study at the University, use all their educational capabilities in their ability to produce unusual, non-standard ideas for teaching. They have high level of fluency and overall creativity.

Emotional intelligence and tolerance for uncertainty in future teachers is this book's third chapter. Authored by Aida F. Minullina and Kseniya V. Pyrkova, the study centers on the relationship between emotional intelligence characteristics and indicators of tolerance of uncertainty of future teachers. Overall, this chapter highlights features of future male and female teachers' responses in situations with some degree of uncertainty, as well as the presence and specificity of relationships between the characteristics of emotional intelligence and their tolerance to situations of uncertainty.

Authored by Viara T. Gyurova from Sofia University St. Kliment Ohridski (Bulgaria), the fourth paper, Teachers and lifelong learning begins with the assertion that maintaining a high level of professional competence becomes a challenge for teachers. The researcher furthermore



states that a SWOT-analysis makes it possible to summarize the advantages (the strengths) and the disadvantages (the weaknesses) of the current system for further education of teachers (in Bulgaria), and the opportunities for teachers to improve their qualification, as well as the threats. Based on these and on the four operational objectives of the National strategy for the development of the school's staff, she summarizes some outcomes for teacher education and development from implementation of the new legislation in this area.

The fifth chapter in this collection is Professional and pedagogical self-development of master's students, future teachers of vocational and higher education institutions. In this chapter, co-authors, Elena V. Asafova and Oksana V. Vashetina focus on exploring changes in the readiness for professional and pedagogical self-development among pre-service teachers during their course of study. Their findings show that readiness for professional self-development increases during the course of training. The authors consider that diagnosis of the actual readiness of master's students for professional and pedagogical self-development enables them to model, design and plan the educational process as a personalized preparation for future pedagogical activity.

Gulnara V. Valiullina and Natalia Y. Boryakova in the sixth chapter, Competence of preschool educators in regard to children with mental retardation in the context of inclusion, present a study of the factors preventing an effective pedagogical correction of developmental deficiencies in the children of preschool age with mental retardation. The authors provide an overview of a program of professional development that provides the formation of scientific and methodical knowledge necessary for effective professional activity in the inclusive groups.

Elena R. Sadykova, Ilmar F. Yarullin, Olga V. Razumova, and Ramis R. Nasibullov are the authors of the seventh chapter in this book, The formation of professional competencies of future math teachers in the context of inclusive education. This evidence-based small-scale study acknowledges the need to organize purposeful, systematic and consistent work on the formation of competencies of the future teachers of mathematics. The results obtained in the course of this systematic and

purposeful work showed that the level of formation of competencies meets the modern requirements of education. The content of the chapter may be useful for the future teachers of mathematics, graduate students, and lecturers of higher educational institutions interested in the formation of a teacher's pedagogical culture.

The eighth chapter is Simulation-based technologies in teacher education (using foresight sessions as an example), co-authored by Leysan R. Kayumova and Venera G. Zakirova. In this article, the authors point out that the benefits of using practice-orientated technologies in tertiary education are becoming apparent. Such technologies enable future professionals to effectively build their knowledge and skills through engaging in hands-on activities. They acknowledge that this approach helps university graduates bridge the gap between their theoretical knowledge and profession-specific practical skills. They identified that simulation-based technologies provide students with behavioral and emotional preparation helping them develop personal traits and noxological competencies necessary for dealing with risk.

In the ninth chapter, Tatiana A. Baklashova, Elena G. Skobeltsyna, and Elena M. Galishnikova discuss the issues of modification of practical training programs in pedagogical masters courses. The authors identify four main findings from their study. They point out the priorities of modifying the practical programs; give a description of the practical training content; discuss the pedagogical conditions for the practices implementation, which contribute to the effectiveness of professional and creative development of future teachers; and uncover the essence of practice-oriented learning technologies, which ensure the gain in educational experience and scientific and academic potential development of graduate students.

Inna I. Golovanova, Nadezhda V. Telegina, and Olga I. Donetskaya analyse, in the tenth chapter, the results of the assessment of the student teachers' ability to design and conduct classes. They discuss the existing system of the competency assessment, determine the criteria for the identification of students who demonstrate a threshold or a below-threshold level of professional competencies and identify potential areas

for further development of students' competencies. Their findings showed "weak spots" of the competency assessment process, and a new insight into the competency development was introduced to the process of educational programmes design.

The eleventh chapter Master's portfolio in education: a fresh view on the process of designing and implementation is authored by Regina G. Sakhieva. Theoretical analysis and expert surveys allowed the author to identify the issues of designing and using a portfolio in the educational practice of teacher training in the Master's degree in Education at a classical university - an insufficiently studied area of theoretical and practical knowledge. The chapter presents the author's structure of the master's portfolio in Education; the specified conditions for student's portfolio implementation at the university as well as the portfolio assessment criteria that were developed and the assessment criteria for its continued maintenance.

The study presented by Rezeda M. Khusainova has psychological well-being of beginning teachers as its focus. The article is aimed at determining the quality of a teacher's life, including the important indicator of the teachers' psychological well-being. The author used WHOQOL100 questionnaire measuring the the beginning teachers' individual perception of their life in those areas that are related to health, as well as the AVEM questionnaire to determine the types of behavior of people in the situation of making professional demands. As a result of this study the author concludes that young teachers identify a good life quality in such spheres as "level of independence", "social relations", "spiritual domain (sphere)". It also established that important conditions for the preservation of novice teachers' psychological well-being are high efficiency, autonomy and independence in decision-making, readiness for energy loss and the ability to distinguish between personal life and professional activity.

The thirteenth chapter discusses the risks of early emotional burnout of young teachers and is co-authored by Lera A. Kamalova and Galina P. Zhirkova. They explored the causes of early emotional burnout of novice teachers, explored the features of emotional burnout of young elementary

school teachers, and developed preventive and corrective measures aimed at reducing the emotional burnout of young teachers. The study revealed that the risk factors for burnout in young teachers include external and internal factors, personal, status-role, professional and organizational factors. They recommend that, to prevent the risks of emotional burnout there should be psychological and educational support of a novice teacher; increasing the importance of the teaching profession; satisfaction of the teacher's need for recognition, self-affirmation and self-expression; unification in professional communities; and mentoring of young teachers.

The relevance of the fourteenth chapter Professional maintenance of upbringing activity of novice teachers: theoretical and methodical bases is connected to serious difficulties that teachers have at the beginning of their professional activity in school. The author, Natalia L. Selivanova focuses on the difficulties associated with the organization of bringing up children. Exploring the components of professional maintenance of the upbringing activities of novice teachers, the author presents the main conditions of the maintenance of novice teachers' upbringing activity including diagnostics of his professional difficulties; equipping a novice teacher with new knowledge and upbringing technologies; affiliation into a professional community; inclusion of a novice teacher in real innovative practice thus forming his own trajectory of professional improvement.

In the fifteenth contribution, Anvar N. Khuziakhmetov examines the development of an effective beginning teacher support system for modern schools. In his study, the author presents the main forms of support for novice teachers, facilitating their further professional development, and promoting their self-realization and professional ambitiousness. He shows that the implementation of a learner-centered approach in the professional adaptation of novice teachers contributes to better adaptation through cooperation and collaboration, as personality traits, values, motives, and the level of training.

The final chapter discusses the role of a teacher in the student's adaptation during the change of a school environment. As a result of their study, the co-authors Nadezhda P. Yachina, Indira M. Salpykova, and Rezeda K. Khurmatullina concluded that pedagogical support is a joint

process, allowing a child to determine his/her own interests, goals, opportunities and ways to overcome obstacles (problems).

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*Chapter 1*

**FUTURE SCHOOLTEACHERS’  
PRECONCEPTIONS AND THEIR  
TRANSFORMATION: TRAINING PROGRAM  
IMPACT ON EPISTEMOLOGICAL BELIEFS**

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## ABSTRACT

The ideas and beliefs pre-teachers have about teaching as a profession and teaching as a process, play a significant role in shaping their epistemology about what it means to be a good teacher. There has been some research devoted to the epistemological beliefs future teachers have about their profession and how these beliefs are later transformed in their learning and teaching process. These studies highlight a number of factors that have great impact on students' perceptions of their future profession, such as the personal experience they received at school, the example of parents or looking after younger children in the family. Thus, an essential task of the teacher training educational program is to identify previously formed ideas about the profession and revamp or even alter these ideas in accordance with current requirements.

This paper aims to outline a general set of preconceptions that students have when they join the education process, and how these preconceptions are later converted due to different situation that students describe as stressful. The in-depth interviews conducted by the authors with 28 university leavers aim to determine retrospectively the factors that influenced the formation of preconceptions before entering the University, as well as to identify the connection between education process provided by the University and the final framework of epistemological beliefs these future schoolteachers have when they come to school. The authors developed a set of categories that might influence the framework and, through the variety of questions that were included into the interview guide, designed the model that describes the critical issues for the formation and transformation of future teachers' preconceptions. The implications of the research evoke reflections on how the future teachers' education process correlates to the result that society recognizes in the teaching profession and how the educational program should be designed to assure a significant transformation of these teachers' views so as to prepare them to be effective in their work. In-depth interviews were conducted among final year students of the primary school children teachers training programs from the Institute of Psychology and Education (Kazan Federal University) and the University of Education of Lower Austria.

**Keywords:** epistemological beliefs, preconception, schoolteacher, education process, training program



## **1. INTRODUCTION**

### **1.1. Identifying the Problem**

The transformation of Russian education system has resulted in a paradigm shift in teachers' training institutions. The ongoing process of socio-economic reforms created a set of problems directly and indirectly related to the teacher training process. The main problem is connected with the quality of teachers' training programs and how well they prepare graduates for the real life. This issue cannot be kept apart from the problem of teacher retention in schools and what measures have to be taken by authorities to increase the number of those who stay long enough to accumulate sufficient experience to be able to form the new generation framework.

These questions are widely discussed by academic society and practitioners all over the world. To solve this problem, a variety of solutions are being proposed. Great attention is being paid to improving the environment in which teachers work by creating a cooperative atmosphere with developed mentoring support. On the other hand, much discussion is devoted to the role of teacher education programs. What should be included in the curriculum to provide not only disciplines that train necessary teaching methods and skills, but also to develop a professional identity that will be respected by pupils and supported by society?

### **1.2. The Problem Status**

The question of teachers' epistemological beliefs must be analyzed in two dimensions: how teachers conceptualize their work, and whether they use concepts based on their personal experience or use the theoretical knowledge that forms their perception of the profession. Clark and Peterson (1986) suggest that "the most resilient or core teachers' beliefs

are formed on the basis of teachers own schooling”. In the research on beliefs published by Schoomer (1994), the nature of knowledge and knowledge acquisition is framed in five dimensions: structure, certainty, source, and speed of knowledge acquisition. These beliefs and the way they are formed can influence the future teachers’ classroom behaviors (Brown & Rose 1995) or they may be altered during education or through pre-service teaching practice.

Pajares (1992) argues that teachers’ beliefs tend to comply with preconceptions on professional activities, especially if there are certain best practices experienced by pre-teachers or certain rules or norms are imposed by regulatory authorities.

Chan and Elliot (2010) examine the relation between epistemological beliefs and conceptions about teaching and learning models pursued by students that are later transmitted to the way they conduct the teaching process. The more sophisticated the belief, the greater the chance for the teacher to have a constructivist conception of learning that fosters active learning environment based on critical thinking, discovery and collaboration.

To examine how teachers’ beliefs are transformed throughout the training program it is essential to identify the influence of critical or stressful situations on their preconceptions about the profession. To do that, it is necessary to take into consideration the situations teachers experience in their professional lives right from the start, from the pre-service level when the first perceptions of being a teacher are formed based on individual beliefs, and how it is later on transformed effected by some experience (for example, the first school practice). From a Vygotskyan perspective, the major objective of any teacher training programs, and of education in general, is the development of an individual’s professional identity (Van Huitzen 2005). Vygotsky identifies the following factors contributing to teachers’ development:

- Participation in a social practice (teacher training);
- Aiming to achieve the ideal (Vygotsky’s zone of proximal development);

- Developing awareness of one's own motives and needs as teachers (public standards versus individual needs);
- Correlation between clearly stated goals and actual practice;
- Development of one's identity as a guided and supervised process;
- Emotional experiences of teachers as fundamental to their identity development.

Three significant aspects of teachers' life – cognition, socialization and emotion can be called crucial for professional concept formation.

Teacher cognition is the cognitive dimension that can be hard to identify, but difficult to alter. It refers to what teachers know, believe and think (Borg 2003). Learning to be a teacher is a process of socialization in which personal biography and social practice – before, during and after formal teacher education - shape the teacher's professional behavior (Williams, 2010). Teachers' past learning experiences form their preconceptions of professional image, predisposition to pedagogical activity and attitude to pupils. This experience serves as a framework through which they identify teaching as a professional activity. During education, certain courses can encourage students to embrace a critical, transformative and educational stance as teachers. Teaching practice is a valuable and meaningful source for understanding school settings, to hone pedagogical skills and to promote self-understanding as a teacher. Teaching is also an emotional practice, which involves an incredible amount of emotional complexities, tensions and challenges (Nias, 1996; Hargreaves, 1998). Teachers' emotions are fundamentally interrelated with their professional identity (Zembylas 2005).

The main aim of this chapter is to identify the correlation between the preconceptions that future teachers had before they joined the teachers' training program and how these concepts are transformed during education.

## **2. METHODS**

### **2.1. The Research Task**

This study focuses upon two research questions:

- 1) What preconceptions do future teachers have about their professional identity?
- 2) How does the training program influence future teachers' epistemological beliefs?

### **2.2. Methods**

The authors applied the following methodology during the research: in-depth interviews and a guidance scheme to interpret survey results (note-taking, and a control experiment)

### **2.3. The Trial Infrastructure and Stages of the Research**

The research was divided into three stages conducted by the authors throughout the year. The initial stage of the research was to develop the questionnaire for in-depth interviews to be conducted among final year students of the primary school children teacher training program.

The aim of the survey was to obtain a detailed narrative interview, which would include the main semantic blocks characterizing the views and beliefs of graduate students about teaching, the teaching profession, the features of students and school. While conducting the interviews, it was necessary to determine the complex opinions of students about the educational program and the importance of pedagogical practice, as well as their impact on the transformation of ideas and beliefs mentioned above. It was essential for formulating his/her idea (concept) of effective teaching

and of the ideal teacher and for reflecting on the transformation of these ideas during the learning process.

### **3. RESULTS**

#### **3.1. Experimental Procedure and Its Description**

Initially the guide was written in Russian language. It was subsequently translated into German to conduct similar in-depth interviews with students of the pedagogy for primary school at University of Education of Lower Austria.

Each in-depth interview was conducted for 20-30 minutes. The authors used the methodology of grounded theory and the method of obtained narratives triangulation to interpret the results and to formulate semantic concepts. The interviews were anonymous to encourage open and sincere answers.

It was crucial for the authors to obtain the narrative elements of the interviews, the answers that contained detailed stories, and narratives with the beginning, middle and the end.

The interview guide consisted of four blocks:

1. Biography and description of the stage at which a profession was chosen.
2. Attitude to training at the University and to the teacher-training program.
3. The importance of practice in the curriculum and the description of the transformation of students' ideas.
4. Ideas about pupils and their interaction with teachers.
5. Ideas about the teaching profession and about effective teaching.

A total of 39 pre-teachers (28 students from Kazan Federal University, Institute of Psychology and Education and 11 students from University of Education of Lower Austria) took part in the interviews.

### 3.2. Results

The results of the interviews can be grouped into eight semantic categories. Each category was formed on the basis of several questions that provide valid sources of preconceptions formation.

- *A Teacher: Calling or Profession.* The bulk of respondents agree that a calling is the precondition for choosing teaching as a profession. However, at the same time, the importance of vocational training is admitted to be the key for obtaining professional competence. The majority mentioned a love for children to be the key aspect of becoming a good teacher.
- *Content of Current Conception of Teaching.* Students did not support the concept that everyone can become a teacher with proper training. They did believe that certain qualities like empathy and love for children are required predispositions for pedagogical activity.
- *Influence of Educational Program.* The impact of the training program was crucial to frame the vision of the future profession, and it advanced concept or led to its transformation. Some courses in the curriculum were seen as decisive in forming professional awareness.
- *Stressful (Transformative) Situation.* The indisputable moment that all respondents recognised which transformed and enhanced their perception of teaching was the first schooling experience when students encountered with real school life and conducted the first lesson themselves. Most of the students described their first days at school in the role of pre-teachers as shocking therapy that changed their mental picture. “You would never be the same again”, said one of the students.
- *Who Are Pupils? How They Learn?* For the majority of students the primary role of a teacher is to stimulate children’s congenital abilities. Taking a different approach to each particular pupil is the characteristic of a good teacher. Teaching methods adopted by

each instructor should stimulate children's creativity and talents. "You should understand children's needs and identify their strong and weak points to be able to motivate them properly", one girl said at the interview.

- *Role of the Teacher.* The conclusion that could be drawn after conducting the interview on teacher's role in education process is unequivocal. The teacher is mainly the facilitator who stimulates a intense desire for knowledge. Nevertheless, some direction is necessary to make this process coherent and productive.
- *Nature of Knowledge (transfer or construction).* Students agreed that knowledge is formed as a result of collaboration. Children learn by experience, so it is important to identify the understanding of what kind of learners they are, with the help of teacher. This is based on emotion and motivation. However, some students noted that learning is knowing it or knowing where to look it up, in other words, knowledge construction.

## CONCLUSION

The results obtained during the research lead to a clear conclusion. The preconceptions that are formed at early age when students are themselves schoolchildren are important. They affect the perception of the training program and influence how well students digest its content. The task of the educational program is to transform these preconceptions and set the new content, which will further determine the nature of the professional activities of young teachers. Interviews show that the preconceptions themselves cover quite broad semantic blocks. These are associated with ideas about how the learning process is carried out, the most effective way the teacher should conduct the lesson, who the pupils are, and how to organize interaction with them.

Practice shows when students join the training program they tend to recall their personal experience of being a pupil and the teaching practice they remember, like, or even dislike. They use these memories and

associations as a pattern of their behavior as a future teacher. Thus, due to the wide variety of individual experiences, we cannot always be sure that certain pedagogical theories are treated and applied similarly by all students. Individual cognitive patterns and school experience influence the perception of theoretical material.

Thus it is critically important to create an environment that will foster stressful situations to alter these preconceptions and to stimulate students critical thinking about “old” and “new” beliefs. These actions should be carefully planned by the academia and supported by active schoolteacher mentoring. In most cases these situations are in practical classes, when students are given the opportunity to carry out elements of teacher professional activities independently. The earlier such stressful situations occur within the framework of the training program, the earlier we can record the real transformative impact of teaching and the educational process on the ideas of future teachers.

In our study, we compare two situations. The educational program at the Austrian University presupposes the beginning of an active pedagogical practice – a stressful situation – at the initial stage of training. The Russian educational program assumes the beginning of active practice only during the third year of training.

The interviews show that Austrian students are much more confident in their abilities to be a teacher. We consider this to be the successful result of completing the educational program. The first year at the University led to confusion, when the existing preconceptions were destroyed and there were no new reliable grounds for understanding the meaning of professional teaching. Further, the training provided the necessary semantic resources for new professional narrative and the formation of cognitive coherence. The only area of uncertainty for graduates remains their interaction with parents. The reason for this is the insufficient attention given to this aspect of teaching professional activity within the framework of educational practices.

The results of the interviews conducted among Russian students indicate a high level of uncertainty regarding their future professional activities, which remains with them for quite a long period. In fact, the



situation of professional concepts transformation occurs in their third year of study during active practice. The remaining education period is not always sufficient to form a coherent semantic picture of their future professional activity, which determines the often-claimed unwillingness of graduates to become a teacher.

This comparative study is only the beginning of the discussion of the importance of the transformation of professional activity concepts among graduates who study pedagogics. The question about the role of educational programs in this process should also be discussed. The result of the study outline the set of recommendations on how to change the structure of these programs and their pedagogical design to form a holistic view of future professional activities.

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*Chapter 2*

**CREATIVE COMPETENCE  
OF FUTURE TEACHERS**

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**ABSTRACT**

The teacher's role in the formation of the student's personality cannot be overemphasized. A creative approach to teaching activity is especially important. The value of forming creativity in future teachers relates to the dynamics of teachers' mobility, and their willingness to implement pedagogical activities in the rapidly changing conditions of Russian education.

Future teacher training should produce a variety of opportunities for effective self-development, viewing the educational environment in terms of creative competence forming. Nowadays, when almost everyone has

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access to information, the main task of the teacher is not just the transfer of knowledge to students, but to teach children to think, generate ideas and actualize their thoughts. Creativity as a competence of future teachers implies the creation of a new product in teaching and learning activity, it means that teacher has to use the innovative methods, forms and technologies and improve their educational activity.

At present there is a lack of studies on the subject of testing the creative competence in future teachers in Russia. There is also a need to clarify the content creativity characteristic in future teacher students.

**Keywords:** creative competence, educational activity, teachers training.

## 1. INTRODUCTION

The purpose of of modern education – development of a scientific and creative environment - is realised through systemically organized activity of the future teacher’s training in combination with the formation of creative competence. By creative competence of future teachers we mean that the person produces something new in their professional activity. The results of creative teaching are seen in the flexibility of the teachers’ actions in classroom.

Torrance formulated the definition of creativity as “creativity is the process of sensing problems or gaps in information, forming ideas of hypotheses, testing and modifying these hypotheses, and communicating the results. This process may lead to any one of many kinds of products-verbal and nonverbal, concrete and abstract” (Torrance 1977, 7). This definition relates to teaching and learning in the specific current situation of preparing future teachers.

The educational environment should provide all the subjects of the educational process with a system of opportunities for self-development. Professional development that includes successful teaching experiences is very relevant for the development of creativity (Sternberg & Lubart 1991; Sternberg 1999; Williams 2002; Sawyer 2011). There is an urgent need to study personality in the context of the practice of creating the potential of future teachers through training (Popov et al., 2018).

It is known that creativity is a competence exhibited by many teachers, but it is not present for everyone. However, we believe that each teacher has the potential to become creative. In Harris' (1998) concept, creativity as a competence is manifest as a skill for producing something novel; thus a creative teacher transforms ideas and knowledge from their classroom experience.

A creative teacher feels and understand all the reasonable risks in classroom situations, his activity is creative and provides strong motivation in students to develop their own cognitive level. A creative teacher encourages self-confidence and self-regulation of students. A creative teacher helps students to look for new ideas and be active in solving problematic issues (Morais & Azevedo 2011).

According to Cremin's idea of creative teaching (2009), the teacher's creativity provides opportunities for making learning more interesting and effective for children. Creativity of teacher identify "children's creative strengths." Cremin's (2009) concept of creative practice includes "teachers' personal characteristics, their pedagogy and the class/school ethos."

This paper is devoted to the personal characteristics of creative competence in teachers. We suggest that teachers' creative competence denotes a dynamic personality quality or characteristic which is manifested in their ability to find original solutions to classroom problems, using non-standard methods. As a creative person, the teacher can foster a practical creative atmosphere.

### **1.1. Purpose and Objectives of the Study**

The question is the problem of monitoring the availability of creative indicators in future teachers. What constitutes the creativity of those students who will be undergoing teaching practice in the future? Are there any differences in creativity indicators between the first-year students and the final-year students?

The research question and purpose of this study is to test the creative competence features in future teachers. It is necessary to clarify the content of creativity in these students. The paper contributes to testing flexibility, originality, and fluency (creative problem solving) in student teachers. The main focus is on the personal characteristic of creativity in teachers.

## **1.2. Literature Review**

Scientific studies in education, from various authors focus on teachers' conceptions of creativity and investigations into students' creativity (Fryer & Collings 1991; Runco et al., 1993; Diakidoy & Kanari 1999; Aljughaiman & Mowrer-Reynolds 2005; Jahnke et al., 2017; Gralewski & Karwowski 2018). These studies provide results on units on creativity attitudes, beliefs and vision of creativity in students and the learning process. For example, the humanistic philosophical orientation in teacher is associated with developed creative competencies, and teachers with non-traditional views prefer to implement specific creative teaching in their classroom that is more effective than traditional instructional approaches (Esquivel 1995).

Other studies focus on the problem of creativity in teachers' practice and towards understanding how creative teachers think, work and act in the classroom (Sawyer 2011). The results and data indicate that "teachers with higher creative self-efficacy and internal motivation were more strongly related to involvement with creative work, compared to teachers with low drive and creative imagination," This means that highest level of teacher's creative work has an impact on successful learning at school (Gaziel, Ifanti & Mendelevich 2018, 71). In addition, it was found that knowledge management dimensions (process, leadership, culture, technology and measurement) relates to the creativity of university teachers (Mazhar & Akhtar 2018).

Furthermore, the main findings presented suggest that the pressures of the curriculum, and the targets and objectives laid down within it, severely

restrict and constrain the creative practices in which the teachers in this school feel able and willing to engage (Dobbins 2009).

In the research from Russian scientists, special attention is paid to the study of teacher creativity in the framework of specific school subjects. Studies are devoted to methods and technologies for the development of creativity of future teachers (Karev & Gorbaneva 2013; Kostryukov & Miroshnikova 2015; Tasova, Niyazova & Berkimbayev 2018).

Generalizing the theoretical frames of this study indicates the following abilities in future teacher's creative competence:

- 1 problem searching and solving style of thinking;
- 2 specific personality features (curiosity, flexibility, enthusiasm, novelty);
- 3 readiness for risk in teaching practice;
- 4 interest in creative classroom climate and creativity in children etc.

## **2. METHODOLOGY**

Variables of creative competence in future teachers such as flexibility, fluency (creative problem solving), and originality were measured, and these indicators of creativity were compared for two groups of future teachers.

The Torrance tests and the Guilford test were used. The Torrance Tests of Creative Thinking (TTCT) is a series of figural exercises (thinking with pictures) and verbal activities (thinking with words) that directed towards creative abilities. The Guilford Test of Creative Thinking (GTCT) is based on the model of the structure-of-intellect (SI). These tests help to identify flexibility, fluency (creative problem solving) and originality.

Every test procedure was carried out individual with each student. The investigation was aimed at revealing the novelty in future teachers' subtest decisions. The differences in creativity between two groups were checked using the Student's t-test (two independent groups were compared).

## **2.1. Participants**

This study involved 54 future primary school teachers: the first group comprised 26 first-year students; the second group comprised 28 final-year students of Institute of Psychology and Education in Kazan Federal University.

## **2.2. Limitations**

This study was conducted on a small sample of future teachers, who are undergoing the Russian system of teacher training. The research results are limited to the statement of the presence of several indicators of creativity. The data obtained provide an opportunity for further analysis and research of creativity as a complex phenomenon.

# **3. RESULTS AND DISCUSSION**

## **3.1. Results**

The distribution of results for creativity in the two groups as measured by the Guilford test is presented in Table 1.

The results show that a high level of creativity is more common in the final-year students. The competence required for teaching practice is indicated by average and high levels of creative activities.

The first-year students group was characterized by an unequal distribution of creative thinking indicators. Some of students in this group had a high or average level of fluency; other students demonstrated flexibility.

Guilford (1968) argues that the ability to anticipate multiple solutions to different problems lies in creative personal thinking – a process called divergent thinking. He identified three components of this type of thinking:

fluency (multiple solutions to a problem); flexibility (rapid consideration of different alternatives); and originality (referring to new ideas). The accumulation of a growing volume of knowledge in teaching relates to the development of divergent or creative thinking.

In the next step, the study assessed student's creativity using the Torrance test (Table 2).

**Table 01. The level of creativity in future teachers (Gilford test results)**

Gilford Test	The first-year students		The final-year students	
	average of creativity	%	average of creativity	%
low level	1,3	23.07	1,75	14.4
average level	3,2	57.7	3	42.8
high level	4,8	19.23	4,5	42.8

**Table 2. The level of creativity in future teachers (Torrance test results)**

Torrance test	The first-year students		The final-year students	
	average of creativity	%	average of creativity	%
low level	-	-	-	-
lower than average level	3	7.7	4	3.5
average level	5	26.9	5	17.8
higher than average level	6	11.5	6	25
high level	7	53.9	7	46.7
the highest level	-	-	7,5	7

In general, the fluency and originality of developed creativity are more prevalent in the group of final-year students. Fluency characterizes a person's creative productivity. The most significant indicator of creativity is originality, while the degree of originality testifies to the uniqueness and specificity of creative thinking.

These creativity test results are scored using different creativity criteria. The TTCT results showed that the final-year students were better

in using verbal stimuli (60.7%), while the first-year student had an average level in verbal tasks (50%).

The analysis of the results indicates significant differences when using the t-test with creative competence ( $p \leq 0.01$ ) in the two groups.

The important findings were that fluency (creative problem solving in GTCT) ( $t^*_{emp} > t^*_{cr}$  ( $t^*_{emp} = 2.1$ ;  $p \leq 0.05$ )) and the level of overall creativity (TTCT) ( $t^*_{emp} > t^*_{cr}$  ( $t^*_{emp} = 2.7$ ;  $p \leq 0.01$ )) were higher in the final-year students group than in the first-year group.

However, the first year-students showed growing tendency to novelty in creative thinking. It was found that the first-year students (57.7%) tried to make novel decisions but the final-year students (71.4%) did not show many attempts to come up with any new solutions to the tasks, in spite of the fact that they found original ideas and answers. They quickly lost interest once they had found a single solution for the tasks.

## CONCLUSION

A high level of fluency and overall creativity was found in future teachers of the final-year course. The research showed that the final-year students were better in using “word thinking,” while the first-year student had an higher interest in searching for multiple new decisions.

Future teachers, who were placed in creative educational activity at university, use all their educational capabilities in producing unusual, non-standard ideas for teaching. At the same time, they are becoming more resistant to increasing novelty in creative competence. Creative competence of future teachers may be reduced, as result of a decrease in their readiness for self-improvement and novelty. The areas that need further exploration are concerned with the problem of forming creative competence in teacher training.



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*Chapter 3*

**EMOTIONAL INTELLIGENCE  
AND TOLERANCE FOR UNCERTAINTY  
IN FUTURE TEACHERS**

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**ABSTRACT**

The modern education system has to satisfy high demands for teachers' professional competence as well as their individual emotional characteristics. Pedagogical activity is rich in various stressful situations; it is associated with the risk of the emotional burnout syndrome. This empirical study was conducted to investigate the relationship between emotional intelligence characteristics and indicators of tolerance for uncertainty among future teachers. It used observation; conversation; and testing with the "Emotional intelligence questionnaire EmIn" developed by Lyusin, PCRS "Tolerance for uncertainty" by Rodnik, Heather, Gold,

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Khal, (adapted by Bazhanova and Bardier). The data were processed using standard methods for calculation of the mean and standard deviation, Student's t-test for technique for assessing the reliability of differences in studied parameters, and Pearson's linear correlation analysis. It studied the characteristics of emotional intelligence and indicators of tolerance for uncertainty in future male and female teachers. The distinguishing features of their emotional intelligence were identified. It investigated the features of future male and female teachers' responses in situations with some degree of uncertainty, as well as the presence and specifics of relationships between the characteristics of emotional intelligence and tolerance to situations of uncertainty. The empirical data obtained in the study contributes to conclusions that can form the basis of recommendations for psychologists working at educational institutions to elaborate programs for emotional intelligence development in future teachers, and to train them to respond to stressful situations in constructive ways.

**Keywords:** emotional intelligence, tolerance, adaptability, coping behavior

## 1. INTRODUCTION

The teacher is a social actor, a carrier of social knowledge and values. The subject characteristics of the teacher therefore combine, intellectual, emotional, volitional, value, moral, spiritual, and reflexive components. In the pedagogical activity process, it is necessary to take into account the individuality, uniqueness and originality of every participant; teachers are supposed to possess certain professionally important qualities to satisfy very high demands.

A teacher with insufficient professional training and a low level of emotional intelligence development suffers irreparable losses as their students are affected, and the psychological atmosphere of the lesson deteriorates. The ability to manage emotions is a component of emotional intelligence – a set of mental abilities to process emotional information - and an important indicator of the level of the teacher's development.



The phenomenon of emotional intelligence and tolerance for uncertainty is closely related to contemporary key issues.

Emotional intelligence is the ability to effectively perceive the emotional sphere of human life: to understand emotions and the emotional background of relationships, and to use emotions to solve problems related to relationships and motivation. The first concepts of emotional intelligence arose in 1990. Since then different authors have interpreted the concept in very diverse manners. This is a group of mental abilities that contribute to the awareness and understanding of one's own emotions and those of other people (the model of abilities). The ability to recognize and express emotions is the basis for generating emotions to solve specific procedural tasks. These two classes of abilities (to recognize and express emotions and use them to solve problems) provides a foundation for the demonstrable ability to understand events that precede and follow emotions. All these abilities are necessary for the internal regulation of the individual's emotional states and for success in influencing the external environment leading to the regulation of both our own and other peoples' emotions (Mayer, Caruso & Salovey 1999).

Increasing flows of information and the pace of life have created a problem of global uncertainty for human existence. On the one hand, no matter how hard people try to keep up with the contemporary demands, even with the most powerful computers, they are forced to act in the context of uncertainty about external information. On the other hand, the desire to "keep pace with the times" inevitably encounters the physiological barriers of the limitations of the human body. In these circumstances, there is a growing interest in the phenomena of tolerance / intolerance towards uncertainty described as early as the middle of the last century. Tolerance of uncertainty is a complex concept uniting the two concepts of uncertainty and tolerance. Despite a large number of different studies, there is no unambiguous understanding of the psychological content of the phenomenon called "tolerance of uncertainty" (Lukovitskaya 1998).

## **PURPOSE AND OBJECTIVES OF THE STUDY**

The purpose of this study was to identify the relationship between emotional intelligence and tolerance of uncertainty in future teachers (both men and women). The following two assumptions were proposed as hypotheses: 1) The characteristics of emotional intelligence and tolerance towards uncertainty indicators are manifest differently in future male and female teachers; that female teachers have higher levels of emotional intelligence than male teachers, while male teachers have higher tolerance for uncertainty than female teachers. 2) There is a relationship between the characteristics of emotional intelligence and indicators of tolerance of uncertainty in future teachers (men and women).

## **LITERATURE REVIEW**

The phenomenon of emotional intelligence and tolerance of uncertainty is closely related to the key issues of the day. The idea of emotional intelligence (hereinafter EI) grew out of the concept of social intelligence developed by such authors as Thorndike (1920), Guilford (1949), Eysenck (1987), and Gardner(1993) who described intrapersonal and interpersonal intelligence within the framework of his theory of multiple intelligences and was especially close to the concept of EI. The abilities included in these concepts are directly related to EI. Other models appeared in the 1990s representing a slightly different view of EI. The best known are those of Goleman (1998) and Bar-On (2000). Mayer, Caruso & Salovey (1999) suggested distinguishing between ability models and mixed models. The first type is their own model, treating EI as a cognitive ability, and the second type includes models treating EI as a combination of cognitive abilities and personality features. Petrides & Furnham (2000) made a slightly different distinction which they considered to be wider: EI could be regarded as an ability or as a trait. Based on existing concepts, Lyusin (2006) proposed his own EI model. Previously, he had defined EI

as the ability to understand and control one's own and others peoples' emotions.

Information about gender differences in the field of emotional intelligence is quite contradictory. Thus, Lyusin (2006) points out some insignificant differences in the emotional sphere between males and females. According to other research, despite the absence of differences between males and females in EI general level (emotional coefficient), women show a higher level in interpersonal indicators of emotional intelligence (emotionality, interpersonal relationships, social responsibility) In contrast, intrapersonal indicators (self-assertion, ability to defend one's rights), ability to manage stress (stress resistance, control of impulsivity) and adaptability (determination of plausibility, problem solving) prevail in males.

Gender stereotypes greatly influence the identification of one's own experiences. Differences in the level of empathy are found only when male subjects have to report how empathetic they tend to be. It is noteworthy that in similar studies, males and females showed the same physiological reactions despite all the differences in their emotional expression (Derevyanko 2007).

Males and females express their emotions with different intensity and by different means. A number of studies have shown that females are more expressive, regardless of their age; at the same time females manifest more emotional behavior in purely female groups than in mixed groups. It is noted that females smile more than males (Lyusin 2000).

Gender difference data relating to EI are generally quite contradictory. In terms of the intensity of its structural components, the understanding of emotions is more prevalent in females than in males. But, in other aspects the differences are more qualitative than quantitative. Males and females experience certain events equally, and they demonstrate identical physiological reactions. However, due to their gender role, they explain the causes of their emotions differently. The expression of emotions in female or male representatives as well as their regulation is largely impacted by the influence of gender norms, formed through education.

There are many humanitarian approaches to the definition and study of tolerance, but at the same time its psychological interpretations are virtually absent. In transitional periods, when the uncertainty of life in society increases, a person needs additional internal strength to overcome various difficulties and problems. The unpredictability associated with unemployment, the inability to get a good education, the impossibility of finding a decent job, and moving from one activity to another, etc. prevents people from living a full life. Most people experience fear and even “disgust” when confronted by the unknown, the obscure and the new. They tend to escape from such situations, and only some of them can enjoy it (for example, artistic or creative people). Tolerance as a personality quality is opposed to stereotyping and authoritarianism. People who excessively simplify the phenomena of the surrounding world and do not have tolerance, are categorical and are incapable of change. In the Western tradition, the study of tolerance of uncertainty is associated mainly with various aspects of coping with uncertainty.

Modern Western studies focus on the investigation of EI in teachers and its influence on pedagogical activity. A number of authors believe that the formation of emotional competence in teachers can increase the efficiency of schooling (Dewaele, Gkonou, & Mercer 2018). Some of them state that training in the development of EI among teachers contributes to the improvement of educational performance indicators (Gilar-Corbi, Pozo-Rico, Pertegal-Felices, & Sanchez 2018).

Kliueva, & Tsagari (2018) conducted a study into the relationship between the level of EI of teachers of English as a foreign language and their learning strategies for developing students’ emotional literacy.

According to Dewaele, Gkonou & Mercer (2018) teachers with a greater ability to cope with their emotions are better at managing discipline in the classroom.

Kaur, Shri, & Mital (2018) demonstrate a model of effective teacher management based on EI and competences. Stillman et al. (2018) considered the way in which schools using EI programs create a positive climate among school. Alam & Ahmad (2018) testify to the positive influence of teachers’ EI on students’ performance in Pakistan. They point

out the positive results obtained during the implementation of teachers' training program in the development of EI skills. Şayır (2018) also indicates the relationship between EI skills of school principals and corporate pedagogical ethics.

Some authors have studied the relationship between EI (and its components) and teachers' professional and personal competence. For example, Dewaele (2018) concludes that a sufficient level of EI in teachers helps them to cope effectively with their emotions and manage the emotions of their students. Teachers' emotional competence contributes to the adoption of innovations at school (Rahayu, Ulfatin, Wiyono, Imron & Wajdi 2018) and allows them to predict students' emotional and behavioral difficulties (Poulou, Bassett & Denham 2018).

Some authors point out the positive influence of teachers' EI on job satisfaction (Zhang, Ahmad & Cao 2018; Li, Pérez-Díaz, Mao, & Petrides 2018); the reduction of loneliness levels in professional life (Tuluhan & Yalcinkaya 2018); an increase of self-realization and mitigation of problems in mental health (Puertas Molero et al. 2018); and a decrease in professional burnout (Esmaili, Khojasteh & Kafipour 2018).

A number of studies are devoted to the study of EI in future and novice teachers. The learning styles and the level of EI in future teachers have been investigated (Öznacar, Soensoy, & Satılmış 2018), and the level of EI of those responsible for training primary school teachers was assessed (Del Rosal, Moreno-Manso & Bermejo 2018).

Safitri, Wijayanti & Masriyah (2018) identified a relationship between the emotional competence of future teachers of mathematics and their creative potential. Prayitno, Suwarsono, & Siswono (2018) found out that novice teachers with a low level of EI carried out their professional duties more formally. Wenn, Mulholland, Timmons & Zanker (2018) identified the relationship between the level of EI in novice teachers and the duration of their teaching experience.

Thus, the relationship of EI, tolerance of uncertainty, and the strategies of male and female behavior have not been studied sufficiently, despite the development of this issue in foreign psychology and an increase in interest among Russian scientists.

## **METHODS**

The study was conducted in three stages: 1) a conversation with the subjects to clarify, supplement and analyze information obtained as a result of techniques applied; 2) testing using the “Emotional intelligence questionnaire EmIn” (Lyusin), the PCRS method “Tolerance of uncertainty” (Spring, Heather, Gold, Khal) adapted by N. Bazhanova and Bardier G. L.; 3) statistical analysis including the calculation of the mean and standard deviation, methods for assessing the reliability of differences in the studied parameters (Student’s t-test), and Pearson’s method of linear correlation analysis.

The study was conducted at Kazan Volga (Federal) University. Senior students (24 men and 26 women) enrolled in the course on “Pedagogical education” were recruited for the study.

The research was carried out in three stages. In the first stage, characteristics of EI in future teachers (males and females) were studied. Indicators of tolerance of uncertainty in future teachers (males and females) were investigated in the second stage. In the third stage, interrelations between EI characteristics and indicators of tolerance of uncertainty in future teachers (males and females) were identified.

## **RESULTS**

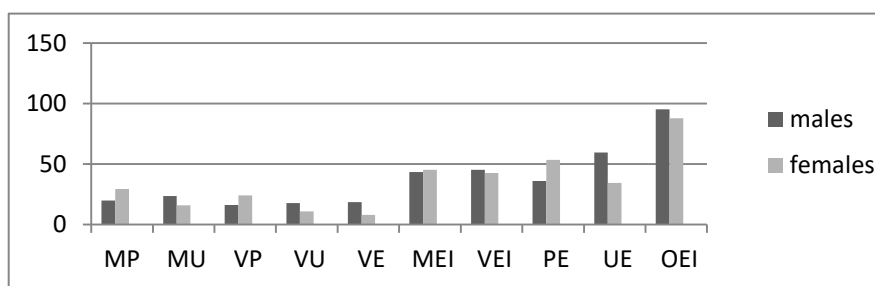
The investigation of EI characteristics in future teachers (males and females) was conducted using the “Emotional Intelligence Questionnaire EmIn” (Lyusin, 2006). It should be noted that such questionnaires (including this one) do not measure the ability to understand emotions or control them, but elicit people’s ideas about their EI. The author of the technique suggests that the self-evaluation of a person’s ideas about some of their properties differ from the true expression of this property. However, on the one hand, it provides the psychologist with important

information about a person, and on the other hand, provides indirect information about the true level of this person's EI.

Subjects aged between 30 to 40 years participated in the research. They were not divided into age groups because Lyusin (2004) concluded that the subjects' age had no influence on the questionnaire's results, and it was possible to conduct statistical analysis and display test standards without this variable.

Figure 1 presents the mean value of EI characteristics expression in the sample of male and female future teachers.

Future male teachers exhibited low scores in understanding other people's emotions (MP) (19.8), understanding their own emotions (VP) (16.04), and a general scale of understanding emotions (PE) (35.84). Average values were found for EI characteristics of: interpersonal EI (MEI), i.e., the ability to understand other people's emotions and their management (43.4); intrapersonal EI (VEI), i.e., the ability to understand and handle your own emotions (45.24). High values of EI characteristics were found for: managing your own emotions (VU) (17.52); managing other people's emotions (MU) (23.6); control of external manifestations of emotions (UE) (59.56); and general EI (OEI) (95.4).



Key: MP - understanding other people's emotions, MU - managing other peoples' emotions, VP - understanding your own emotions, VU - managing your own emotions, VE – control of expression, MEI - interpersonal EI, VEI - intrapersonal EI, PE - understanding emotions, UE - management of emotions, OEI - general EI.

Figure 1. Differences in emotional intelligence characteristics expression in males and females.

Thus, the EI characteristics associated with the process of controlling and managing emotions are more prominent in future male teachers than those related to the process of understanding, of both their own emotions and emotions of other people.

Future female teachers had low scores for: managing your own emotions (VU) (10.7); the management of other people's emotions (MU) (15.92); control of external manifestations of emotions (VE) (7.8); and general EI (OEI) (34.44). They had average values for: intrapersonal EI (VEI) - the ability to understand and control your own emotions (42,6); interpersonal EI (MEI) - the ability to understand and control the emotions of other people (45.24); and general EI (OEI) (87.84). They scored highly on: understanding your own emotions (VP) (24.08); understanding other people's emotions (MP) (29.32); and the general scale of understanding emotions (OEI) (53.4).

It was noted that future female teachers have highly developed EI characteristics related to an understanding, both of their own emotions and the emotions of other people, and less developed characteristics in the process of managing and controlling emotions.

The significance of differences between the mean values of EI characteristics in the subjects of both groups was determined with Student's t-test.

The intensity of EI characteristics associated with the process of understanding their own emotions and other people's emotions (MP, VP) in future male teachers was significantly lower than that of future female teachers ( $t = 2.79$  at  $p < 0.01$ ;  $t = 4.86$  at  $p < 0.001$ , respectively). But at the same time, the intensity of characteristics associated with the management of their own and others peoples' emotions (VU, MU) together with the control of external manifestations of emotions, was significantly lower in male subjects than female subjects ( $t = 2.34$  at  $p < 0.05$ ;  $t = 2.15$  at  $p < 0.05$ ;  $t = 5.02$  at  $p < 0.001$ ). Furthermore, the general level of EI, was found to be significantly higher in male subjects than female subjects ( $t = 4.0$  at  $p < 0.001$ ).

It should be noted that these results contradict a generally accepted point of view that women have a higher EI (Derevyanko, 2007). A



probable explanation is that in self-reporting, male subjects demonstrate greater confidence in their competence and higher self-efficacy. It is noteworthy that the greatest differences are observed on those scales where the male advantage corresponds to gender stereotypes, e.g., the notion that men exercise better control of their emotional expression and their own emotions, in general.

Thus, future male teachers have a higher level of EI than future female teachers, as well as those characteristics related to the process of handling and controlling emotions. Women, however, have better developed characteristics of EI associated with the process of understanding emotions.

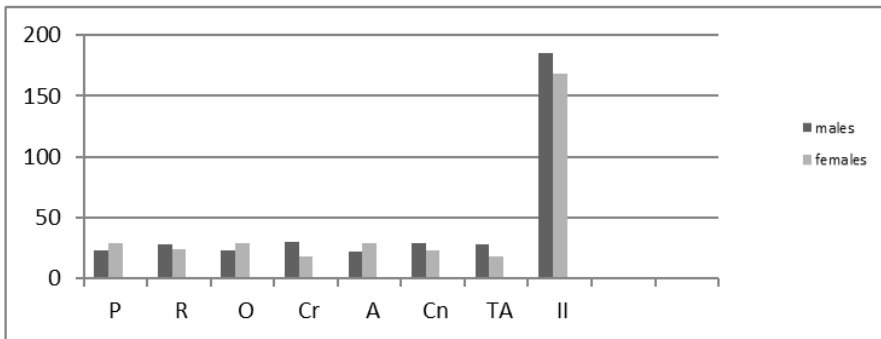
The study examined indicators of tolerance of uncertainty in future teachers (males and females). A constructive attitude to uncertainty is expressed in the acceptance of the inevitability of uncertainty, the recognition of uncertainty, developing a position in relation to reality its assessment as it is perceived. Then in accepting responsibility for actions under conditions of uncertainty, understanding and accepting the impossibility of any decision that is unambiguous, unique, and “most correct from all points of view.” Followed, finally, by an internal readiness to accept the results based on both predictable and unpredictable actions (Shipilov, 2008).

Figure 2 presents mean values of uncertainty tolerance indicators for the male and female samples.

Future male teachers do not show low levels of tolerance of uncertainty. They have average scores for: “passion” (emotionality, impulsivity) (22.64); “optimism” (22.5); and “adaptability” (22.44). They score highly: “resourcefulness” (28.2); “courage” (29.44); “confidence” (29.28); “tolerance of ambiguity” (28.4); and integrative (a general indicator of tolerance (185.56).

These results can be explained using the research conducted by Balabanova (2002), Zhukova (2010), Kletsina (2009), and Rebrova (2010). Analysis of their gender studies on the characteristics of male and female responses in situations with a certain degree of uncertainty shows that masculine features of coping behavior are associated with an orientation

toward independent behavior and self-efficacy. Men often either withdraw into themselves or display tough authoritarian styles of interaction. Furthermore, men have a more pronounced cognitive component of uncertainty perception. According to Salikov & Sheremetova (2016), men tend to take a higher risks when making decisions, due to their higher aggressiveness, independence in actions, and a greater expressed need for dominance and self-affirmation (Lyusin 2006).



Key: Numbers indicate tolerance of uncertainty. P - passion, R - resourcefulness, O - optimism, Cr - courage, A - adaptability, Cn - confidence, TA - tolerance of ambiguity, II - Integrated indicator of tolerance.

Figure 2. Differences in the expression of uncertainty tolerance indicators in males and females.

Thus, male subjects show high confidence in their abilities; their eagerness to find something new and unknown; a remarkable ability to find their way out of difficult situations; self-control when in a situation where information is deficient or lacking. These characteristics determine their general high level of tolerance of uncertainty.

As Figure 2 shows, female subjects have two low level indicators of tolerance of uncertainty: “courage” (17.76), and “tolerance of ambiguity” (17.6). They exhibit average levels in indicators for “resourcefulness” (22.4), “confidence” (22.56) and by the integrative (general) indicator of tolerance of uncertainty (168.56). They score highly for “passion” (emotionality) (29.4), “optimism” (29.36), and “adaptability” (29.4).

The studies by Lukovitskaya (1998) confirm these results. According to her assessment, the emotional component of perceiving uncertainty is expressed more in women; it is manifested in a significant emotional intensity of feelings and contradictions. The tolerance of uncertainty in women depends on their self-esteem, their degree of satisfaction with their lives and their evaluation of a significant environment (Shipilov 2008). An analysis of gender studies by Salikov & Sheremetova (2016) showed that when women make decisions in the face of risk and uncertainty, they choose more cautious strategies (Lyusin, 2006). According to Balabanova (2002), Zhukova (2010), Kletsina (2009), and Rebrova (2010), women are more inclined to adapt to difficult life situations than to overcome it (Shipilov 2008).

Thus, future female teachers are less adventurous and have low tolerance to unfinished and ambiguous situations, with a low desire to find something new, but at the same time they have increased emotionality, optimism and ability to adapt as well as change their plans and decisions.

The significance of differences between the mean values of tolerance of uncertainty expression in the subjects of both groups was determined with Student's t-test. According to the results of the study, significant differences were found between the subjects of both groups in all indicators of tolerance of uncertainty.

Future male teachers have significantly higher indicators than future female teachers of "resourcefulness" (temp = 2.03 at  $p < 0.05$ ); "courage" (temp = 4.86 at  $p < 0.001$ ); "confidence" (temp = 3.55 at  $p < 0.001$ ); "tolerance of ambiguity" (temp = 4.87 at  $p < 0.001$ ); integral index of tolerance of uncertainty (temp = 4.98 at  $p < 0.001$ ). However, the female subjects have reliably higher indicators than future male teachers of "passion" (emotionality) (temp = 3.73 at  $p < 0.001$ ); "optimism" (temp = 3.4; at  $p < 0.01$ ); adaptability (temp = 2.92; at  $p < 0.05$ ).

The results obtained are also supported by gender studies. Many authors confirm that psychological means for overcoming of life difficulties and situations of uncertainty are determined by gender-role stereotypes. Women (and feminine men) tend to defend themselves and solve difficulties emotionally, while men (and masculine women) on the

contrary, do this instrumentally, by transforming an external situation (Shipilov 2008).

Therefore, future male teachers have high rates of tolerance of uncertainty associated with entrepreneurship, courage, a thirst for new experience, self-confidence, and self-control, and they are more tolerant of uncertain situations than women. Women possess to a greater degree those indicators of tolerance of uncertainty that are associated with emotionality, optimism, and the ability to adapt to the situation.

In order to identify the relationship between EI characteristics and indicators of tolerance of uncertainty in future male and female teachers, the Pearson linear correlation coefficient was used.

According to the correlation analysis between EI characteristics and indicators of tolerance of uncertainty in future male teachers, we can assert that: 1. The higher the male ability to control emotions, the less emotional and impulsive they are. 2. The higher the male ability to manage their emotions (in particular, the emotions of other people), then the less optimistic (or rather realistic) they are, and the higher their EI and tolerance of uncertain situations. 3. The less pronounced the ability of men to understand their emotions and the emotions of other people, the higher the level of EI they possess. This pattern can probably be explained by the fact that low indicators of understanding emotions are compensated by high indicators of controlling emotions. 4. The higher the EI in men, the less they are able and want to adapt to circumstances and the more tolerant they are of ambiguous, unfinished situations. 5. The higher the level of tolerance of uncertainty in future male teachers, the more realistic they are assessing a situation and the less ready they are to adapt to it.

The results of the correlation analysis between EI characteristics and indicators of tolerance to uncertainty in future female teachers, lead us to assume that: 1. The higher the ability of women to understand their emotions, the better they understand the emotions of other people, and the higher their EI and the less their tolerance of uncertain situations. 2. The lower their ability to manage their own emotions, the less able they are to manage the emotions of others and the lower their EI. 3. The more optimistic and reliant solely on the best outcomes of events, the less able

women are to control the emotions of other people and less tolerant they are to situations of uncertainty. 4. The more emotional and impulsive women are, the lower level of EI and tolerance of uncertainty they have.

## CONCLUSION

The results from the study lead us to the following conclusions: 1. Future male teachers have a higher level of EI than future female teachers, as well as characteristics related to the process of handling and controlling emotions. Characteristics of EI that are associated with the process of understanding emotions are better developed in future female teachers. 2. Future male teachers have high levels of tolerance of uncertainty due to entrepreneurship, courage, their thirst for novelty, self-confidence, self-control, and they are more tolerant of uncertain situations than women. Future female teachers show indicators of tolerance of uncertainty that are associated with emotionality, optimism, and the ability to adapt to the situation. 3. The idea of EI characteristics and attitudes toward uncertain situations is determined by gender-role stereotypes. 4. There are indirect relationships between EI and tolerance of uncertainty. Their characteristics and indicators are regarded as mediating chains in these links.

Thus, the hypotheses put forward at the start of the study were partially confirmed. The assumption that the characteristics of EI and that the indicators of tolerance of uncertainty have varying degrees of manifestation in future male and female teachers has been confirmed. The hypothesis concerning higher levels of EI in future female teachers than in future male teachers has been refuted. The second hypothesis about the existence of a relationship between EI characteristics and indicators of tolerance of uncertainty in future teachers (men and women) was confirmed.

The results obtained in the study can be applied to the training of future teachers to provide a more effective adaptation to their professional activities, self-realization and the prevention of burnout syndrome.

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## *Chapter 4*

# **TEACHERS AND LIFELONG LEARNING**

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## **ABSTRACT**

Nowadays, nobody would deny that quality education requires many highly qualified staff. So, to keep their qualifications teachers need to learn throughout their lives. They need to be current with the novelties in their scientific field, and that scientific innovation is a continual process. Teachers must be able to use the latest technical and technological achievements to facilitate students' access to knowledge. Again, such new technologies and technical resources appear practically every day. Maintaining a high level of professional competence is a challenge for teachers.

The analysis explores the parameters of this challenge through a SWOT-analysis and the Six Questions approach. The SWOT-analysis sets out the advantages (the strengths) and the disadvantages (the weaknesses) of the current system for further education of teachers in

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Bulgaria, the opportunities for teachers to improve their qualification as well as the threats.

The Six Questions approach outlines the dimensions of the problem of teachers' continuing pedagogical education through the answers to the following questions: Why is life-long learning a challenge? When does life-long learning become a challenge? What is the challenge? Who is at the center of the challenge? Where is the challenge for Bulgaria? How can we respond to this challenge? The teachers' opportunities to upgrade their knowledge and skills are summarized.

**Keywords:** teachers, life-long learning, SWOT-analysis, Six Questions approach

## **1. INTRODUCTION**

### **1.1. Identifying the Problem**

Hardly anyone would question the need for teachers to learn throughout their lives. They must keep up with the continual innovations in their scientific field, Teachers should be able to use the latest technical and technological achievements to facilitate students' access to knowledge. Again, such new technologies and technical resources appear practically every day. Thus, maintaining a high level of professional competence becomes a challenge for teachers.

The goal of this analysis is to outline the parameters of this challenge by using the Six Questions approach and a SWOT-analysis of the characteristics of the current system for further education of teachers in Bulgaria.

### **1.2. The Challenge for Teachers to Learn Throughout Their Lives**

The dimensions of the life-long learning challenge for teachers can be outlined by using the Six Questions approach:

- *Why* is life-long learning a challenge? – because in order to employ the right choice from the variety of the available educational services, the teacher should be able to choose the one that is suitable for his/her own objectives and specific needs.
- *When* does life-long learning become a challenge? – when pedagogical staff are pressed by the condition to acquire quickly new knowledge and skills which become outdated just as quickly.
- *What* is the challenge? –despite the abundance and variety of courses offered, very often exactly what a particular teacher needs is not available (there is a particular Bulgarian proverb saying: “Walking in water, yet staying thirsty”).
- *Who* is at the center of the challenge? – first of all, teachers, who have to find the time to learn in addition to the many other tasks they need to do, but also those who provide various educational services (heads of educational institutions, people who organize courses, educational services intermediaries, teachers/trainers who run these courses, authors of educational resources and means, as well as legislators (lawmakers) whose legal decisions should facilitate the regulation and control of the supply and demand at the market of educational services.
- *Where* is the challenge (for Bulgaria)? – in that:
  - there are international decisions and national strategies for life-long learning, but there is often a shortage of funds for meeting teachers’ educational needs;
  - there is an increasing supply, but also a declining demand for educational services from pedagogical staff due to financial constraints and a lack of motivation (because additional training does not guarantee additional or better payment for pedagogical work);
  - there are higher expectations and demands from parents and society with regard to school, but only few courses in the educational services market that are actually oriented towards school practice;

- there are more useful guides on the market to support teaching activity, but also a weaker demand for, and reading of, methodological and other pedagogical literature, etc.
- *How* can we respond to this challenge? - by making management decisions aimed at increasing the funds targeted for qualification of the pedagogical staff on the one hand, and by linking remuneration with better qualification and better quality of pedagogical work on the other hand.

## 2. METHODS

The analysis aims to outline the characteristics of the system of initial and further teacher education in Bulgaria, the challenges and opportunity for improving teacher's professional qualification. The Six Questions approach helps to outline the dimensions of the problem of teachers' continuing pedagogical education through the answers to the questions set out above. The SWOT-analysis makes it possible to summarize the advantages (the strengths) and the disadvantages (the weaknesses) of the current system for further education of teachers (in Bulgaria), the opportunities for teachers to improve their qualification as well, and the threats. Based on these and on the four operational objectives of the National Strategy for the development of school staff, the chapter summarizes some outcomes for teacher education and development from the implementation of the new legislation in this area.

## 3. RESULTS

### 3.1. What is the Current Situation with Teacher Qualifications in Bulgaria?

The inefficiency of staff provision in the educational system (including the continuing qualification of teachers) is one of the problems of school



education in Bulgaria identified by both school principals and teachers. On the one hand, there is a considerable shortage of young teachers and also a shortage of teachers in a number of subjects (foreign languages, ICT, natural sciences). On the other hand, working teachers need substantial additional qualification in terms of utilizing new (interactive) methods, educational technologies and technical resources, as well as for tackling the problems of aggression at school and working with parents.

Outdated legislation and lack of standards for initial training, for upgrading qualifications, for control of the quality of work and for the control of the courses offered for continuing qualification, have led to the following problems (National Strategy, 2016:20):

- different levels of training for young pedagogical staff;
- lack of mechanisms for validating the results from the different forms of training for upgrading qualification;
- varying quality of the training for continuing qualification, which are not linked to acquiring Professional and Qualification Degrees (PQDs) because they are carried out by different institutions, non-governmental or private organizations;
- imbalances in the market of qualification services for conferring PQDs. The principle of competition is violated because there are only three specialized institutions (university departments) which are authorized;
- limitations of new opportunities for learning outside the system of formal education and training, which are crucial for developing the competences of pedagogical staff. At present, there is no mechanism for validating the knowledge, skills and competences acquired through non-formal training and/or informal/self-learning;
- insufficient coordination between the two subsystems in education – secondary and higher - which has a negative impact on the relationship between university teacher training and the particular needs of a school and teaching staff themselves. The teachers'

academic training is far too theoretical and does not adequately meet the specific requirements of the real school environment.

Recognizing these needs, the Ministry of Education and Science (MES) has developed: the National Strategy for the development of pedagogical staff, the National plan for qualification of pedagogical staff (2014-2020), the Draft Ordinance amending and supplementing Ordinance № 5 of 29.12.1996 concerning the conditions for improving the qualification of pedagogical staff in the national education system, the procedure for acquiring professional qualification, and the National program for development of school education and pre-school education and training (2006 - 2015). The last of these provides for (horizontal) career development of teachers and educators by successively endowing teaching positions with increasing responsibilities.

High hopes are invested in the National Strategy for the development of pedagogical staff (February 2016), which also makes provisions for (National Strategy, 2016: 31-32): “building a unified system of education and continuing qualification”; “statutory guarantees for the rights and obligations for professional development”; “creating better conditions for professional and career development”; “equality and competitiveness of qualifying institutions.”

According to the National Strategy, the system for qualification of pedagogical staff in education should be viewed as three interrelated areas – a legal framework; a system for improving qualification; and institutions and organizations (National Strategy, 2016). The legal framework outlines the conditions for acquiring pedagogical training – basic or initial pedagogical (including methodological), subject and psychological preparation, as well as continuing qualification of the teaching staff. It is based on legislation concerning education (educational laws for different educational levels and rules for their application, and special regulations for the qualification of teachers and other professionals working in the educational system).

According to the law, a teacher in a Bulgarian school can be a graduate in a given area who has acquired the qualification of “a teacher.” In the

academic year 2013 - 2014 pedagogical training for the degrees of “Bachelor” and “Master” were offered by 11 universities in Bulgaria (The National Strategy, 2016: 6), and the acquisition of the professional qualification of “a teacher” was offered by 40 faculties, two affiliated universities, two colleges, the Center for continuing education, the Center for qualification and the Department of qualification (The National Strategy, 2016: 5).

After acquiring initial training and a degree (Bachelor or Master) and the professional qualification of “a teacher,” working teachers have opportunities for improving their qualification or for additional specialization provided by various faculties, departments, centers for continuing education, centers for postgraduate qualification, departments and units for improving qualification and specialization in higher schools. These are all elements of the system for enhancing the professional skills of teachers in Bulgaria, which includes the objectives, forms, levels and vocational qualification degrees as well as the institutions authorized to deliver continuing (further) qualification of teachers and other pedagogical staff.

According to the new legislation, the upgrading of teachers' qualification in Bulgaria is “a continuous process of improvement and enrichment of pedagogical specialists' competencies for effective fulfillment of the requirements of the work performed as well as for career development” (Pre-school and School Education Act, 2015: Art. 221 (1)). It is planned, coordinated, managed, and controlled at national, regional, municipal and school level and is implemented by formal and informal educational institutions – specialized service units, higher schools, scientific organizations, and educational organizations whose training programs have been approved by the Ministry of Education and Science (MES). The acquired qualification is assessed through a system of qualification credits and is certified by a document. The qualification credit framework is determined by the state educational standard for the status and professional development of teachers, directors and other pedagogical specialists. (Pre-school and School Education Act, 2015: Art. 222. (1), (2); Ordinance No. 12, 2016; Ordinance No. 15, 2019).

Within an extended market of educational services in Bulgaria outside the higher education, the system of non-formal education (with its private companies for educational services, educational centers, NGOs, etc.) offers courses, seminars, training, etc. that are different in duration, form and subject and that enable teachers to complement and upgrade their professional competencies (knowledge, skills, experience) and to develop their pedagogical, methodological, and psychological culture. For this purpose, the MES has created an information register for training organizations that are outside the formal education sector.

### **3.2. Characteristics of the System and the Opportunities for Further Education and Improving Teacher's Professional Qualification (SWOT-Analysis)**

There are good traditions in the field of education and additional qualification for teachers in Bulgaria. The first university in the country (today's Sofia University St. Kliment Ohridski) was started in 1888 specifically to deliver a course for teacher education. Now teacher education is offered through many university's bachelor and master degrees.

The SWOT-analysis, albeit not exhaustive, highlights some particularly important characteristics of the system and the opportunities for further education, and for improving teacher's professional qualification.

- *Strengths of the existing options:*
  - Statutory requirements for planning and carrying out qualification activities at institutional level.
  - Clear rules and procedures for acquiring professional and qualification degrees and career development of teachers.
  - Special financing (initially at national, and later, at institutional level, as part of the budget of the educational institution) for the participation of teachers in qualification activities.

- A combination of initiatives and opportunities for further (continuing) qualification of teachers at national, regional and institutional level.
- A variety of institutions and formats, providing opportunities for improving teachers' professional qualification;
- Free access to these institutions and formats.
- Expanding opportunities for participating in conferences, working on national and international projects and studying abroad.
- *Weaknesses of the current system:*
  - An outdated and cumbersome system for acquiring five vocational qualification degrees, which practically excludes the pedagogical faculties. As a result, in 2013, only 36.2% of the working professionals in the school education sector and the servicing units (the majority of whom were teachers) had such a degree, thus increasing the percentage of the staff with the low 4th and 5th degree (from 10.7% in 2007 to 17.8% in 2013), while the percentage of pedagogical staff with acquired high – 1st, 2nd and 3rd – vocational qualification degree declined – from 18.8% in 2007 to 18.3% for 2013 (Figure 4) (The National Strategy, 2016: 14).
  - Organizational inefficiencies of the system. Despite the large supply of formats for short- and long-term training, in the years of transition there was a serious decline in teachers' activity in terms of participation in different qualification formats. The degree of involvement of teachers from all types of educational institutions in short-term training (60 hours) varied between 4.7% and 8.7% for the period from 2008 to 2011, and was 7.8% in 2012 (The National Strategy, 2016: 14). Even weaker is the activity in participation in long-term training (specializations, training for acquiring a teaching qualification, etc.) lasting over 60 hours. "For the period 2007 - 2012 6504 pedagogical workers were involved in long-term training. Only 1.2% of the total number of these workers

participated in long-term training. This level of participation is considered highly insufficient” (The National Strategy, 2016: 16). According to the National Strategy, there was an increase in activity in terms of improving the qualification and professional competencies of pedagogical staff working with children and students with special educational needs, especially pedagogical staff in resource centers for supporting integrated training and the education of children with special educational needs.

- Weak or ineffective diagnostics for the needs for teachers’ qualifications, the results and application of lessons learned in various courses.
- Striving to achieve quantitative indicators (the number of courses and “trained” teachers, the number of certificates of participation in training) at the expense of quality.
- Lack of monitoring and quality control of training in qualification formats.
- Entry of non-professional organizations (NGOs) and “educators” in the educational services market, training teachers through various courses as part of projects.
- Insufficient funding of qualification activities as a whole.
- Insufficient financial incentives for teachers to seek further qualifications and specializations. This is often cited as a reason for the decline of interest in qualification activity.
- *Opportunities:* The opportunities that the system for improving professional qualification offers teachers in terms of acquiring knowledge, skills and professional growth to:
  - Enrich their knowledge, skills and experience.
  - Cope better with their professional duties.
  - Learn useful things from colleagues they meet when attending courses.
  - -Access international programs (Comenius, Grundtvig, etc.) for specialization abroad.

- Upgrade and enrich their experience through joint training with teachers from their country and abroad within training as part of projects.
- Advance in their career by acquiring greater competences.
- *Threats and risks* for teachers with regard to their involvement in qualification activity to:
  - Not get their due recognition from colleagues and management for their efforts.
  - Not justify the money and effort they have invested.
  - Encounter “unprofessional” trainers.
  - Not have their expectations met in terms of the content and quality of education.
  - Get training that is too “theoretical.”
  - Waste precious time which they could have invested in more useful activities.

### 3.3. What Can Be Done?

The changes are set out in the National Strategy for the development of pedagogical staff and its four operational objectives [The National Strategy, 2016: 33-34]:

- Development and recognition of a unified and uncontroversial system for training and continuing qualification of pedagogical staff. The first steps are made by the Ordinance №12 (2016), replaced by Ordinance №15 (2019).
- Development of a unified legal framework for state regulation of initial training, continuing qualification and professional development of pedagogical staff. The first steps are made by means of a credit system and standards (state requirements) for teacher qualification.
- Development of a system of quality control, differential payment and professional growth.

- Development of a system of special measures for attracting, retaining and developing pedagogical staff aged up to 35 and specialists with a high level of professional training and qualification in the system of secondary education.

Each of these objectives includes specific activities aimed at achieving the strategic goal: “By 2020 Bulgaria should have established a unified and efficient system of education, training, continuing qualification and conditions for professional development of pedagogical staff.” (The National Strategy, 2016: 33). The successful implementation of this would lead to:

- Updating the legislation.
- Easing the procedure for the acquisition of PQD.
- Using the options of teachers’ self-assessment of their real needs for qualification.
- Strengthening the control over the quality of services offered for teachers’ qualifications.
- Diagnostics of the usefulness of the knowledge, skills, experience and attitudes acquired in the various qualification formats by monitoring their application in pedagogical practice.
- Expanding the opportunities for online teacher qualification formats (the creation of educational platforms, virtual classrooms, etc.);
- Expanding and enriching the opportunities for in-school training, including an increase of the funds in the budget allocated for this activity.
- Establishing a better correspondence between the quality of a teacher’s pedagogical work and the qualification activities and their respective remuneration.

It is noted that in countries where teachers’ remuneration corresponds to their qualification by rewarding their effort and the higher quality of their work, the effectiveness of schools and the effectiveness of education



as a whole has proved to be better. This is no accident: in the conditions of a market economy, everything is a commodity – including teachers' education and labor.

## CONCLUSION

Nobody would now deny that quality education requires many highly qualified staff and high levels of funding (many private schools prove this). Highly-qualified teachers deserve an appropriate salary, and the maintenance of their qualifications also needs significant funding. And hardly anyone would doubt, when we have highly-developed educational technologies and technical means, that to provide quality education with just a chalk and a blackboard (or just a marker and a whiteboard) is only an imitation of quality. To develop the creative personalities of teachers who do not maintain their competence at a high level is just an illusion or demagogy. No one benefits from this – neither the students, nor the teachers, nor the society as a whole.

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## *Chapter 5*

# **PROFESSIONAL AND PEDAGOGICAL SELF-DEVELOPMENT OF MASTER'S STUDENTS, FUTURE TEACHERS OF VOCATIONAL AND HIGHER EDUCATION INSTITUTIONS**

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## **ABSTRACT**

An important component of the current renewal of the education system is the professional self-development of teachers. A teacher, engaged in continuous professional and creative self-development, can engage more successfully in the innovative transformation of the educational process, a key contribution to quality education. Thus, in the

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process of preparing students for subsequent pedagogical activity it is important to create conditions for their professional and pedagogical self-development. This study is aimed at identifying changes in the readiness for professional and pedagogical self-development among pre-service teachers during their course of study. Based on an analysis of the basic components of professional and pedagogical self-development (motivational, cognitive, moral-volitional, gnostic, organizational, communicative, and an ability to self-control), it was concluded that student's readiness for professional self-development increases during their training. The difference in the readiness of graduate students for professional self-development is determined by their previous education and experience. The study concluded that a diagnosis of the actual readiness of master's students for professional and pedagogical self-development enables the modelling, designing and planning of the educational process as a personalized preparation for future pedagogical activity.

**Keywords:** higher education, master's course in teacher education, master's students, pre-service teachers, professional self-development, readiness for professional and pedagogical self-development

## 1. INTRODUCTION

### 1.1. Identifying the Problem

In the modern world, ideas about the aims, functions and results of educational activities are being transformed. The idea of self-development is an important value-based element of modern education which determines the preparation of future teachers. The system of higher pedagogical education is focused on solving the problems of training teachers who are competent and capable of professional growth. Basically, the modern educational paradigm involves the formation of teacher's readiness for self-development and continuous self-education.

Professional and pedagogical self-development is based on enhancing the levels of creativity, independence, and mobility in the context of development of professional competence demanded by society. Readiness for professional and pedagogical development is an internal condition for



the improvement of a professional pedagogical culture. In university training, it is necessary to create conditions for the professional and pedagogical development of students. During the master's course focused on preparation of students for subsequent teaching and research activity, conditions must be created to increase the individual's readiness for professional self-development.

## **1.2. Status of the Problem**

An important component of the current renewal of the education system is professional self-development of teachers. Self-development, is an important personality trait. Personality characteristics such as professional self-determination, professional position, professional world view, professionally important qualities, knowledge, skills, professional activity, and professional orientation, are considered to be prerequisites of professional development (Zeer 2001). In turn, the lack of orientation to the future profession makes it difficult to achieve the process of professional self-development (Beloborodova & Chernikova 2014).

Higher education professionals must recognize these challenges and provide a supportive transition to a career by fostering the idea of constant learning to compete in the marketplace. As the workplace evolves, there are significant influences which govern and shape the need to provide a pathway for our students (Cord & Clements 2010). The success of the professional development of a specialist depends on the degree of readiness for self-development at this stage of their professional training (Tropnikova 2012). Andreev (2004) believes that the educational process should be designed on the basis of teaching students how to develop themselves. To accomplish these tasks, there should be new type of teacher education with a greater technological component. The creation of a learning environment, providing pre-service teachers with opportunities for self-development, favorably affects pedagogical training and promotes their subsequent professional self-development. The more actively a

student takes advantages of the educational environment, the more intensive his or her self-development (Beloborodova & Chernikova 2014).

Based on the analysis of teacher training policies in 25 countries, the OECD (Organisation for Economic Co-operation and Development) report cogently entitled “Teachers Matter” states that teacher quality is the most important factor in an education system, and the second most important factor (only preceded by family background) among the various influences affecting student achievement. (OECD 2005). Thus, the self-development focus of pre-service teachers is the most important factor in their professional and personal development. Professional learning for teachers is of increasing interest as one way to support the complex skills students need to acquire in preparation for further education and work in the 21st century. Sophisticated forms of teaching are needed to help students develop such qualities as mastery of challenging content, critical thinking, complex problem-solving, effective communication and collaboration, and self-control. “In turn, effective professional development is needed to help teachers learn and refine the pedagogies required to teach these skills” (Darling-Hammond, Hyler & Gardner 2017). To develop these skills, teachers need to be involved in continuous development themselves, but more importantly they need to be aware of this need during their pre-service teacher training (Straková 2015).

Professional and pedagogical self-development are key to teacher quality improvement. Teachers are constantly learning new technologies and ways of interacting with students (Delvin & Samarawickrema 2010). A variety of technologies for the implementation of teacher education, aimed at improving the quality of teacher training, should foster the subsequent involvement of graduates in innovative professional activities.

“Teachers achieve readiness through education and training before entering the profession and during continuous professional education after commencing their profession” (Yıldırım 2016).

“Readiness of trainees for their future profession is traditionally measured by the means teachers of tertiary education usually have at their disposal – exam grades, and teaching practice feedback from supervisors as well as final evaluation at the final state exams” (Straková 2015).

However, one of the important stages for future teachers in mastering the skills of professional and personal self-development is the diagnosis of their initial level of professional and personal self-development (Smantser 2017).

## **2. METHODS**

### **2.1. The Research Task**

This study identified changes in the partial readiness for professional and pedagogical self-development among pre-service teachers during their course of study. Partial readiness for professional pedagogical self-development of a future teacher can be understood as readiness for self-development in relation to changes in various components of professional activity (motivation, ability to self-organize personal activity, communicative competence, moral and volitional qualities, etc.) (Kiseleva & Soloviev 2017).

### **2.2. Theoretical and Empirical Methods**

The empirical study (2018-2019) involved master's students at the Kazan Federal University majoring in "Pedagogy of Higher Education" and "Pedagogy of Professional Education." A survey was conducted among 44 first- and second-year master's students. The sample included students who completed the first stage of higher education (Bachelor's degree), as well as students with educational experience (working in educational organizations) and students who were enrolled on a master's course after completing the previous stage of higher education.

The study included questioning, testing, analyzing and comparison of results, as well as statistical analysis. The questionnaire for students enrolled on vocational courses was provided by the Institute of Pedagogy at Justus Liebig University (Giessen, Germany), and the Department of

Professional Pedagogy headed by Prof. Marianne Friese. (The questionnaire was developed by Laura Gronert). A diagnostic methodology was applied to determine the level of partial readiness for professional and pedagogical self-development (Fetiskin, 2002). This technique allows subject to self-assess their self-development skills with regard to the following components - motivational, cognitive, moral-volitional, gnostic, organizational, communicative, as well as the ability to self-control. A special feature of the diagnosis is the inverse relationship between a number of points that a respondent gains during self-assessment and his or her readiness for professional self-development. The reliability of the results obtained was evaluated by Student's t-test ( $P \geq 0.95$ ).

### **3. RESULTS**

#### **3.1. Experimental Results**

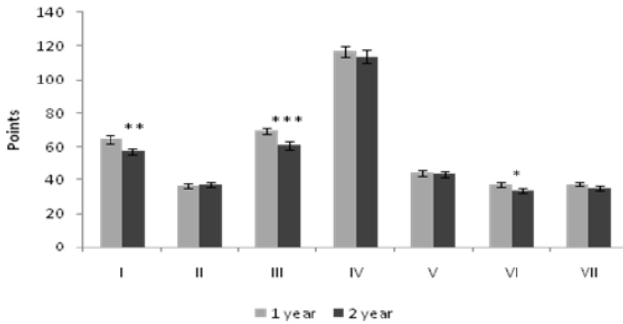
In the course of the study, it was determined that the first-year students assessed their motivational, moral-volitional components and the self-control ability slightly higher than the second-year students (Figure 1). These professional and pedagogical self-development components include: a persistent cognitive interest in the field of pedagogy and psychology, the need for psychological and pedagogical self-education, determination, autonomy, performance, self-control, and many others. At the same time, the results indicate a higher level of readiness among the second-year students for further professional and pedagogical development.

It was found that students with a university degree in teacher education, evaluate the cognitive component of professional and pedagogical self-development higher than other components, compared with students without that degree (Figure 2).

The cognitive component of professional and pedagogical self-development includes general education, specialist subject, psychological, pedagogical and methodological knowledge and skills. It was expected that students who have a university degree in teacher education (bachelor's

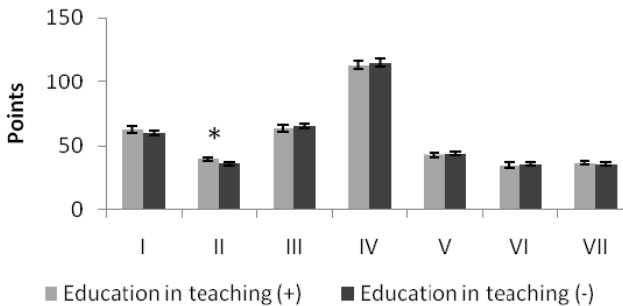
degree) rate their knowledge and skills higher. As a result, students who have not completed pedagogical training show higher readiness for professional self-development.

Similar differences in the cognitive component of professional and pedagogical self-development of master's students were obtained when comparing two groups of students - those with teaching experience and those without it (Figure 3).



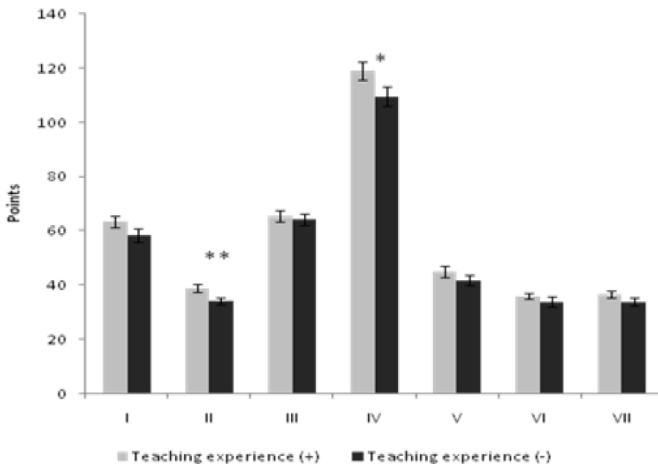
I - motivational, II - cognitive, III - moral-volitional, IV - gnostic, V - organizational, VI - self-control ability, VII - communicative; \* - differences are significant ( $P \geq 0.95$ ), \*\* - ( $P \geq 0.99$ ), \*\*\* - ( $P \geq 0.999$ ).

Figure 1. Components of partial readiness for professional and pedagogical self-development in first- and second-year master's students.



(components I -VII are the same as in Figure 1); \* - the differences are significant ( $P \geq 0.95$ ).

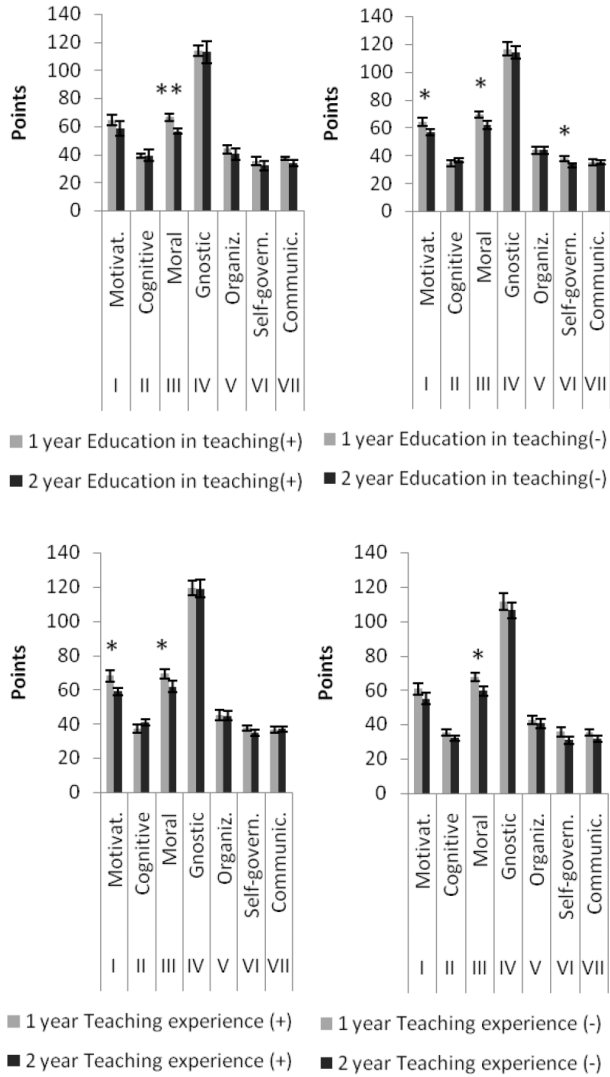
Figure 2. Self-assessment of components of professional pedagogical self-development by master's students, with and without teacher education.



(components I - VII are the same as in Figure 1); \* - the differences are significant ( $P \geq 0.95$ ), \*\* - ( $P \geq 0.99$ ).

Figure 3. Self-assessment of components of professional and pedagogical self-development by graduate students with teaching experience and without it.

Characterizing the readiness for professional and pedagogical self-development of the first- and second-year students in two groups (with and without teacher education; with and without teaching experience (Figure 4)), the study identified patterns similar to those shown in Figure 1. The first-year students assess the moral-volitional, motivational components of professional and pedagogical self-development, as well as the ability to self-control more highly than senior students (Figure 4). At the same time, there was a difference in the evaluation of the moral-volitional component of professional self-development by the first- and second-year students, regardless of whether or not these students had received teacher education, and whether or not they had experience in teaching. The moral-volitional component was determined on the basis of students' self-assessment of a positive attitude to the learning process, demonstration of their readiness to increase determination, their independence and self-criticism.



In the first pair of bar graphs, students are divided into groups according to a university degree; in the second pair, they are divided by teaching experience (components I-VII are the same as in Figure 1); \* - the differences are significant ( $P \geq 0.95$ ), \*\* - ( $P \geq 0.99$ ).

Figure 4. Partial readiness of the first- and second-year master's students for professional and pedagogical self-development.

At the same time, teaching experience influences the difference in the motivational component of professional self-development among students. The second-year students are more interested in self-knowledge and continuous education in the teaching profession (Figure 4).

## **4. DISCUSSION**

The study showed that there are differences in readiness for professional and pedagogical self-development among the first- and second-year master's students with a higher level of readiness in the second-year students. It can be assumed that when carrying out theoretical and practical tasks, as well as in conducting scientific and research work, master's students gain experience and realize the importance of continuing education for pedagogical activity. Through the process of continuing education and self-development, professional competence is achieved, personal responsibility and autonomy in teaching increase, and readiness for continuous improvement is developed (Guschina & Burmistrova 2018).

Comparing the self-assessment data for the formation of self-development skills by the first-year master's students with those obtained earlier (Asafova & Fazlyeva 2018), one can note their similarity. The survey data indicate high absolute values of most components of students' readiness for professional and pedagogical self-development, corresponding to relative values of 70-85% of the maximum possible. However, this indicates a low level of readiness for further professional and pedagogical development. Diagnostic experiments by other researchers (Sokolov 2014) show low and medium levels of readiness for professional self-development for more than half of the pre-service teachers.

The results, which indicate differences in the cognitive component of professional and pedagogical self-development among students of two groups (those with and without pedagogical experience, Figure 3), are similar to our previous data. It was shown that there are differences among graduate students in their readiness for professional and pedagogical self-development, depending on their teaching experience or a lack of it



(Asafova & Fazlyeva 2018). These differences are mainly connected with higher values of the cognitive component of self-development among students with pedagogical education and teaching experience (Figures. 2 and 3). Consequently, the readiness for subsequent professional and pedagogical self-development in terms of the cognitive component of students without previous experience, may be due to their lack of psychological, pedagogical, and methodological knowledge and skills.

Furthermore, such students are characterized by a greater readiness for professional and pedagogical self-development - its gnostic component (Figure 3). This includes an ability to set and complete cognitive tasks, an ability to analyze pedagogical activity, and the manifestation of creativity in teaching. It is reasonable that master's students with the teaching experience evaluate their gnostic component more highly (Figure 3).

The research demonstrates the differences in the moral-volitional and motivational components and the self-control ability among the first- and second-year master's students, with and without pedagogical education and teaching experience (Figure 4).

These differences can be explained by the specific implementation of the educational program for the training of vocational and higher education teachers. The didactic system of teacher education at Kazan Federal University draws on the competence approach, module-based curricula and the introduction of modern educational technologies, including interactive and IT, into the educational process. Practical training for graduate students is provided by increasing the amount of practical class-work (up to 80% of study time), internships which comprise 40% of total hours of the master's program, as well as an individual approach to training, including implementation of research work and selection of elective courses. The master's course is characterized by an interdisciplinary approach that integrates the content of academic modules, innovative learning technologies, high-tech educational tools, and student-teacher relationships in accordance with modern educational standards. As a whole, this creates the conditions for professional and pedagogical self-development of future teachers.

## CONCLUSION

On the basis of the analysis of the main components and procedural characteristics of the readiness of master's students for professional and pedagogical self-development, it was concluded that the level of readiness increases throughout the course of study. An important finding was that the demonstration of readiness for professional self-development depends on prior teacher education and experience. Encouraging a future teacher to master the skills of professional and personal self-development increases the possibility of a more successful involvement in innovative professional activities.

The importance of the study is that the diagnosis of the initial level of students' professional and personal self-development enables teacher educators to model, design and plan the educational process as a personalized preparation for future pedagogical activity.

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*Chapter 6*

**COMPETENCE OF PRESCHOOL EDUCATORS  
IN REGARD TO CHILDREN WITH MENTAL  
RETARDATION IN THE CONTEXT  
OF INCLUSION**

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**ABSTRACT**

This article considers the need to develop the competence of teachers in providing pedagogical assistance to children of preschool age with mental retardation in an inclusive educational environment. It analyzes empirical data to determine the factors which prevent an effective pedagogical correction of developmental deficiencies in these children. It

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presents the results of the research on the formation of the tutors' methodical competence to organize an inclusive educational space for pupils with health challenges. The program of professional development to provide the development of scientific and methodical knowledge necessary for effective professional activity to include these inclusive groups is discussed. The program content is aimed at modernizing the psychological and pedagogical knowledge of teachers in preschool educational institutions as well as collecting information from the field of correctional and developmental education of preschool children with mental retardation. The research used a pedagogical experiment to examine the characteristics and dynamics of the formation of the methodological component of the professional competence of educators and their readiness to work in inclusive education.

**Keywords:** children with disabilities, children with mental retardation, inclusive educational environment, professional competence, methodological competence, correctional and developmental education

## INTRODUCTION

Changes in the socio-economic, political and spiritual areas of life have created a number of theoretical and practical problems, one of which is the pre-school education of children with disabilities. Several factors make this particularly relevant. Firstly, the scope of inclusive education practices for children with disabilities is expanding. Secondly, due to the adoption of the Federal State Educational Standard for Preschool Education (FSESPE), the preschool stage has, for the first time, become a legitimate part of the educational space. Previously, activities in this field were only a preparatory stage for school. Thirdly, the FSESPE aims to solve a wide range of tasks relevant to the education of all preschool children. In the absence of a special FSES for preschool education of children with disabilities, teachers face considerable difficulties in designing Adapted Basic Educational Programs (ABEP) to work with various categories of children needing special educational provision, including in particular, the numerous children with mental retardation (MR).



Mental retardation is a complex polymorphic disorder which affects various components of cognitive activity, the emotional-volitional sphere, and psychomotor development. Specific features of children' development in this category adversely affect the appropriate development of all types of preschool activities: visual, playful and constructive. The polymorphism of disorders and varying degree of their manifestation mean that children have different possibilities of assimilating the main preschool educational program. Yet, the education system is not sufficiently prepared to ensure conditions for cognitive and emotional-personal development to meet their educational needs.

Addressing these differences in the physical and/or mental development of pupils assumes the individualization of educational work and remedial impact, especially in the context of inclusive education. Therefore, teacher-therapists, speech therapists and all teachers of preschool educational organizations need to master special knowledge and technology, so as to increase their professional competence and methodological literacy in matters related to design and implementation of ABEP while working with children with MR.

An analysis of the main educational programs including secondary education, higher pedagogical education, advanced training and retraining programs for teachers working with preschool children showed that the content and technologies aimed to develop the theoretical, psychological, pedagogical, methodical knowledge needed in this area have not been adequately specified. Frequently, educators in preschool groups and the senior educators who providing methodological guidance in nursery schools lack basic ideas about causes and manifestations of psychomotor and speech development retardation in children of early and preschool age. Educators are not fully aware of the content of the ABEP Model for preschool education of children with MR approved by the Ministry of Education; they are not ready to select educational content, to design a developing subject-spatial environment for these children because of the fragmented presentation of this knowledge in secondary special and higher education programs.

Institutions of additional pedagogical education are advised to provide methodological assistance to teachers of preschool educational institutions to overcome difficulties in designing ABEP for working with preschoolers with MR. In advanced training, it is possible to resolve the issue of developing methodological competence associated with the education of children with MR in an inclusive pre-school environment.

## **PURPOSE AND OBJECTIVES OF THE STUDY**

The purpose of the research was to study the qualitative characteristics of methodological and professional competences of nursery school' educators and their readiness for teaching in an inclusive educational context.

Research Objectives:

1. To carry out a literature survey of the current state of developing educators' methodological competence in regard to the provision of inclusive education for children with MR, and to identify tasks to develop methodical readiness to work with children with MR in inclusive education in the higher- and supplementary-education system.
2. To develop diagnostic tools to assess educators' methodological competence to arrange inclusive education for children with MR.
3. To investigate the state of educators' methodological competence to arrange inclusive education for children with MR.

## **LITERATURE REVIEW**

The problem of teachers' readiness to implement inclusive practice is considered in the works of many Russian scientists such as Sabelnikova (2009), Makarova (2013), Samsonov (2013), Alekhina (2016),

Romanovskaya & Khafizullina (2014), Syrotyuk (2012), Shilova (2015) and others. Russian researchers unanimously believe that a purposeful and comprehensive formation of this special competences in teachers is developed through advanced training courses involving specialists from various fields including pathologists, neurologists, therapists, psychologists, psychiatrists, etc. They believe that this formation will promote effective work aimed at the implementation of an inclusive approach to the education of children with special needs.

Russian researchers (Alekhina, 2016; Kutepova 2013; Semago, Semenovich, Dmitriyeva, &Averina, 2011; Khizhnyak, 2016; Avvakumova, 2017; Fedorova, 2013) and foreign (Samadi & Conkey, 2018; Frederickson & Cline, 2002; Cate, Dell, & Thompson, n.d.) consider that training of competent educators who are able and ready to work effectively with children with special educational needs is required in an inclusive educational environment as a prerequisite for the improvement of inclusive preschool practices.

Khizhnya (2016) reviewed the process of primary and preschool educators' competence formation and development, and analyzed the inclusive educational environment. He stated that the educator's methodological activity in inclusive education was to design individual developmental programs, to select methods and techniques corresponding to child's psychophysical development, and to contribute to the implementation of correctional and developmental tasks.

Smirnova (2015) identified the educator's functional responsibilities in inclusive groups and proposed that additional professional competences be included in university curricula.

A number of studies have been carried out in recent years where the concept of "inclusive competence" has been considered. They covered the stages of future teachers' inclusive competence formation, the specific need for training specialists for corrective activities in an educational organization, and demonstrated the influence of a properly organized inclusive educational environment on the socialization of children with disabilities (Romanovskaya & Khafizullin, a 2014; Chigrina, 2010; Shumilovskaya, 2011; Cherkasova, 2012; Quenstedt, 1988; Bao, Li,

Zhang, & Wang, 2015). However, these works were mainly focused on training future specialists and failed to address the problems of those educators who already work in the education system and face problems of teaching children with disabilities.

Avvakumova (2017) considered that work in inclusive education is considered as a personified and continuous process. Therefore, educators' training should include informative and organizational components and be aimed at the development of professional competence, described as the ability to solve professional problems in the field of inclusion. The content component of teacher training was represented by a program that included interrelated modules based on the selected trends in the field of inclusion and the educators' professional difficulties. The organizational component was represented by an educator training program based on the use of humanitarian technologies, enabling the formation of educators' readiness (motivational-value, operational-activity and reflexive-evaluative) to work in the inclusive educational environment.

Sabelnikova (2009) recognized that, in the framework of inclusive education, the following components are necessary for personal and professional training of the teaching staff at education institutions: 1) teachers' knowledge about the essence of inclusive education and its features and differences from other forms of education for children with disabilities; 2) knowledge of psychological, personal and age characteristics of children with disabilities; 3) knowledge of design methods, competent psychological and didactic construction of the process in which children with disabilities and children without special educational needs are trained together; 4) the ability to interact competently with all participants in the educational process.

Makarova's (2013) study identified three dominant competences of educators in the system of inclusive education: 1) the ability to find an individual approach for different categories of children with special educational needs (motivational and operational, various aspects of competence); 2) the ability to organize the process of teaching children with disabilities within inclusive education (the operational aspect of competence); 3) the availability of knowledge of specific physiological and

mental processes in children with special educational needs (cognitive aspect).

However, these studies do not give specific details for training educators to work with preschool children with disabilities.

Samsonova (2013) described the development of professional competencies of an educator implementing inclusive practice at a preschool educational institution. She specified differences in competencies of nursery school educators of general, combined, and compensatory orientation. Unlike educators of general developmental groups, most educators of compensatory groups were familiar with the basics of special needs pedagogy and special psychology, they knew peculiarities of working with children with different categories of disabilities, they accepted children with disabilities, demonstrated greater willingness to work in inclusive education, they had previous work experience as members of a psychological, medical and pedagogical council, and knew how to organize educational activities for children with disabilities. Samsonova & Melnikova (2016) asserted that inclusive practice is a creative process that implies the need to establish new forms and ways of arranging educational processes that meet children's individual differences. One of the conditions was a special set of professional competencies that would allow the teacher to implement inclusive practices.

Boryakova (2017) summarized the experience of long-term research and experimental work and noted that the development of scientifically based methods and content of remedial and pedagogical work with preschoolers with MR can be considered as one of the priority areas of theory and practice. It is obvious that the key factor contributing to the development of the psyche of a child with disabilities, and his/her social rehabilitation and adaptation, is the remedial effect applied at a sensitive period. Preschool group educators of any profile should be prepared to work in a psychological and pedagogical support team for children with MR.

The issue of training specialists for work in an inclusive educational environment is also relevant in foreign countries. Finland, Norway, and

Germany (Baymenova & Zhubakova, 2018) can be considered as experienced and successful countries in the training of specialists for inclusive work with disabled children.

A readiness to implement inclusive practices is the key for training modern teachers in Finland. In addition to research activities in the framework of university training, such abilities as observing, analyzing and understanding children's individual needs are developed in future teachers (Zinovyeva & Bersenev, 2012).

The concept of adaptive education while training future specialists is effective in Norway. Teachers are taught to adapt educational processes to the children's various needs.

In the UK, teachers of inclusive pre-school institutions receive special training in working with children with disabilities (Volosovets, 2017).

Samadi & Conkey (2018) conducted a study of educators and teachers in Iran and identified problems with inclusive education of children with disabilities. They found problems in the educators' and teachers' willingness to undertake inclusive education. As a result of the study, the researchers concluded that teacher training is the key to educational system reform and the creation of conditions for children with special educational needs.

Lee, Yeung, Barker, Tracey & Fan (2015) undertook research among educators and teachers in inclusive institutions, and came to conclusions about the best allocation of resources so as to successfully promote inclusive education.

The analysis of foreign studies has shown that the problem of inclusive education is being actively studied, and that there are effective inclusive practices, for example, in Germany, Great Britain, Norway and other developed countries. However, most studies are conducted in relation to children of school age, and the problem of methodological assistance to educators working with pre-school children with disabilities has been insufficiently studied.

## **METHODOLOGY**

The research used a review and analytical study of psychological, pedagogical and methodical literature on the problem of developing methodological competence for the integrated education of children with MR, and a classical, controlled pedagogical experiment. The study was carried out at Kazan (Volga Region) Federal University in the city of Kazan, the Republic of Tatarstan, at the Moscow Psychological and Pedagogical University in the city of Moscow, and at preschool educational institutions in Moscow and the Republic of Tatarstan.

The study was conducted in three stages:

- *The first stage* – the preparatory stage - analyzed current pedagogical theory and practice, elaborated the program and selected the research methods;
- *In the second stage – the main stage* – there was a study of the levels of methodical training of educators for inclusive education of children with MR; an additional educational program was developed and implemented to form educators' methodological competence for inclusive education of children with MR; and experimental work was carried out to verify the effectiveness of this program;
- *In the third stage – the final stage* – the research results were systematized, understood and generalized; theoretical conclusions were reached; and the research results were processed and recorded.

## **RESULTS**

A sample of 48 teachers participated in the study and were divided into experimental and control groups. The experimental group (EG) consisted of 24 teachers who subsequently studied refresher courses on the issues of

inclusive education of pre-school children with MR; the control group included 24 teachers who did not complete these courses.

Diagnostic tools were developed for the study of this competence: methodological competence was studied using tasks aimed at specifying the degree of proficiency in diagnosis and designing a psychologically comfortable correctional developmental environment, as well as the ability to create individual programs for psychological and pedagogical support of preschool children with MR.

Having generalized the experimental data and analyzed the scientific literature, criteria were developed and used to highlight the levels of methodological competence for the inclusive education of pre-school children with MR (Table 1).

**Table 1. Criteria and levels of methodological competence for the inclusive education of pre-school children with MR**

Levels	Methodical competence
High	Having a wide range of diagnostics and designing a psychologically comfortable correctional and developing environment, the ability to create individual programs for psychological and pedagogical support of preschool children with MR
Middle	Difficulties in creating individual programs of psychological and pedagogical support of preschool children with MR.
Low	Lack of skills to create individual programs of psychological and pedagogical support for preschool children with MR

**Table 2. The results of educators' professional competence level diagnostics in relation to educational space organization for children with MR in inclusive preschool education**

Levels	Methodical competence	
	Experimental group	Control group
high	17%	12.5%
middle	17%	25.0%
low	66%	62.5%



The experiment revealed similar percentages of educators with a low (EG – 66.0%; CG - 62.5%), middle (EG – 17.0%; CG – 25.0%) and a small percentage of educators with a high level (EG – 17.0%; CG - 12.5%) of special professional competence (Table 2). In general, the results show that the initial level of methodological competence for the inclusive education of pre-school children with MR is the same in both groups; everyone shared the same conditions before the experiment.

This pilot study showed the need to develop a program for the formation of educators' methodological competence in the organization of an inclusive educational process for children with MR in preschool education.

Future research is related to the development and implementation of the program for developing professional competencies in nursery school educators for implementing inclusive education, including special competences in: necessary theoretical and psychological knowledge, emotional-personal qualities, skills to apply methods and techniques of diagnostics and design of spatial-development and a psychologically comfortable educational environment.

## **DISCUSSION**

Currently, there is intensive development of the philosophical and cultural foundations, and the methodological and organizational aspects of inclusive education. It is possible to answer urgent questions of inclusive practice through a consistent conceptual and methodological substantiation of inclusive education, and to determine the limits of its interaction within the system of general and special corrective education. These issues are discussed by Nazarova (2011), Bogdanova (2013), Makarova (2013), and Semago (2013).

An analysis of socio-pedagogical effects of inclusion in education is important (Alekhina, 2011; Kraineva, 2013; Paletskaya & Polyanskaya, 2013).

The idea of focused training of the innovative teacher and his/her professional competencies is presented by Baydenko (2005), Dorofeyeva (2005), Kutepova (2011) and other researchers. Considerable attention is paid to the implementation of the principle of continuity and differentiation of educator development, the development of professional interests, research and creative skills, and the teacher's professional and pedagogical culture (Selivanova, 2017; Štemberger, 2013; Rakap, Cig & Parlak-Rakap, 2017).

Some studies on the problem of advanced training and professional development of preschool group tutors conducted by Anokhina (2013), Samsonova (2013), Fedorova (2013) are important for this research. However, there has been insufficient research into the pedagogical conditions for developing educators' professional competence to provide psychological and pedagogical support for preschoolers with mental retardation.

## CONCLUSION

The study concluded that: the process of professional competence' formation in educators and their training for psychological and pedagogical support of pre-schoolers with MR requires a theoretical and methodological elaboration.

Educators demonstrated a low level of knowledge about clinical, psychological and pedagogical features of mental development retardation. Most of them were not familiar with the Model Adapted Basic Educational Program for this category of children. They did not understand the algorithm and did not master the basics of building and implementing diagnostic, correctional, developmental and educational components of the pedagogical process in an inclusive nursery school group. Educators only had a slight idea of the ways of implementing pedagogical correction of deficiencies in the child's development, while adapting the content of each of the five areas of pre-school education. Educators were not prepared to work within multidisciplinary teams of specialists to provide highly

qualified assistance to children with MR and their preparation for schooling.

Stage-by-stage formation of the necessary methodological competences in the educator is not an isolated task. Professional development implies the formation of the complex of pedagogical competencies, and psychological preparation for work with children with disabilities in an inclusive educational environment.

The scientific novelty and theoretical significance of the study are that the empirical data that was obtained and analyzed enables us to determine the qualitative characteristics of methodological professional competence in nursery school educators and their readiness for teaching in inclusive education.

The study shows the prospects for developing the content of an additional educational advanced training program to form professional competence in educators of pre-school educational institutions needed to implement inclusive practices.

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*Chapter 7*

**THE FORMATION OF PROFESSIONAL  
COMPETENCIES OF FUTURE MATH  
TEACHERS IN THE CONTEXT  
OF INCLUSIVE EDUCATION**

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**ABSTRACT**

Changes affect all fields of the educational process. One of these changes is inclusive education, including cooperative training and the

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education of children with disabilities, disabled children and ordinary students. The solution to a wide range of new tasks of inclusive education requires changing the system of educational training. One of the priority tasks of the modern school is to identify the abilities of each student and developing their personality to be capable of living in high-tech conditions. These factors make new demands on the specialist's personal characteristics and competence. This research addresses the lack of elaboration of the theoretical and practical foundations of the practice-oriented professional training of future teachers. It aimed to develop a didactic model of the formation of professional competencies of future mathematics teachers in inclusive education, and to determine and substantiate the pedagogical conditions developing these competencies inclusive education. The study addresses the concept of professional readiness of a future teacher to work in inclusive education and identifies features of professional competencies of future mathematics teachers. The research adopted a systems approach to the classification and generalization of pedagogical experience to discover the essence of the problem. The resulting model is focused on students' mastery of professional competencies and their improvement in inclusive education.

**Keywords:** inclusive education, children with special needs, disintegration, multiculturalism, humanization, humanity, inclusiveness, professional competence, readiness

## INTRODUCTION

Inclusive education has an important place in the development of international and domestic educational space and is being given great importance by various researchers. Modern education is becoming inclusive, open and accessible to every child. Federal Law No. 273 of the Federal Law "On Education in the Russian Federation", adopted in 2012, enshrines the right of every child to receive education taking into account their individual characteristics and needs (Ministry of Education and Science of the Russian Federation 2012).

Modern education is focused on the inclusive approach to teaching children with disabilities, so the question of the readiness of future teachers to work in inclusive education is both significant and relevant. The key

problems are the preparation of future teachers and the development of professional competencies needed for inclusive education.

The introduction of inclusion in the educational system requires new approaches to the professional training of future teachers, in particular, teachers of mathematics. The problem of future professional training occupies an important place in many universities across the world. Programs have been implemented which are based on the active learning methods, in which the student is central. This raises the question of the implementation of “reflection on the ethical obligations and social consequences of each profession” (Rhodes 2001).

### **Purpose and Objectives of the Study**

The formations of professional competences of future teachers of math in inclusive education will be effective if the following items are implemented, taking into account the developed model of formation:

- integration of subject, methodical and psychological-pedagogical training;
- organization of the educational process using metacognitive technologies with the means of information and communication technologies;
- an organic combination of classroom and extracurricular educational work;
- implementation of the continuity of theoretical and practical training;
- humanization of pedagogical communication and interaction, the organization of partnerships and creative cooperation between teachers and students.

## **Literature Review**

The concept of “inclusive education” has become the subject of pedagogical and psychological research. Studies by Bazhukova (2013), Denisova (2014), and Akçamete & Gökbulut (2017) are devoted to various aspects of inclusive education; Petry (2018) and Rangvid (2018) also consider this concept from various sides.

The works of foreign authors Moriña & Carballo (2017) and Pancsofar & Petroff (2016) explore the problem of determining the essence of the concept of “inclusive education”.

The development of the theoretical foundations of inclusive education are presented in the works of Ainscow & Messiou (2017) and Opie (2018). The works of Yan & Deng (2019) and Marín-Díaz (2018) highlight issues related to the implementation of innovative educational changes, the use of digital resources in teacher training in the inclusive educational environment.

Problems of the implementation of inclusive education are highlighted in the works of Akhmetzyanova, Artemyeva, Nigmatullina, Kurbanova & Tvardovskaya (2015), Mitchell (2011). The studies conducted by the Russian scholars Zaitsev (2008), Malofeev (2011), Nazarova (2008), Ponomareva & Khuziakhmetov (2017) are of great scientific interest.

The problems of the inclusive competence of future teachers (Khafizullina 2010), the organizational and the pedagogical conditions for teaching children with disabilities with means of inclusive education (Gafari 2012) are analyzed in pedagogical dissertations. The authors reveal the concept of professional competence as an integral multi-level professionally significant personality characteristics and activities of the teacher. The researchers covered the nature and components of the professional competence of a teacher (Khuziakhmetov & Mukhametishina 2015).

The concept of “readiness” is considered in the study of Mataice (1999) as a holistic manifestation of personality, “reflecting a person’s state before an activity, depending on personal characteristics and qualities (individual psychological aspect), his/her mood to overcome difficulties in

solving a problem (motivational aspect) and practical preparation for forthcoming activities (cognitive-operational aspect).”

The preparation of a math teacher in enhancing the cognitive activity of students is considered by the researches (Fazleeva & Timerbaeva (2017); Timerbaeva, Fazleeva, & Shakirova 2016). The study (Wilkie 2019) discusses the bidirectional nature between teachers of mathematics and researchers in the process of vocational training.

An analysis of the literature showed that researchers, defining the requirements for the preparation of a future teacher, in particular, teachers of math, consider the teacher’s professional and personal readiness. This readiness includes components such as the ability to perform certain types of professional activity in the form of groups of pedagogical skills and a specific set of professional competencies.

## **Methodology**

### ***1. Tasks of the Research***

- 1) To consider the concept of professional readiness of a future teacher to work in inclusive education, to identify the features of professional competencies of future teachers of mathematics.
- 2) Develop a model for the formation of professional competencies of the future teacher of mathematics in inclusive education.
- 3) Experimentally check the effectiveness of the pedagogical conditions of formation, determine the ways of forming professional competencies.

### ***2. Theoretical and Empirical Methods***

In accordance with the tasks a complex of methods was used: theoretical (analysis of philosophical, psychological and pedagogical literature on the research problem, the study of mass and generalization of advanced pedagogical experience, pedagogical modeling), empirical (pedagogical observation, conversation, questioning, interviewing, testing,

expert survey, stating and forming experiment, methods of mathematical processing of research results).

### ***3. The Experimental Base of the Research***

The experimental base of the research was N.I. Lobachevsky Institute of Mathematics and Mechanics and the Institute of Psychology and Education of Kazan (Volga region) Federal University.

### ***4. Stages of the Study***

The study was conducted in three stages.

At the first stage, the philosophical and psychological-pedagogical literature on the research problem was studied and analyzed, the practical experience of solving this problem was generalized, the main contradictions and problems existing in this field were determined. A research hypothesis was formulated, its goals and objectives were defined, and a scientific-logical system was developed.

At the second stage, a theoretical study was conducted; a model for the formation of professional competencies was developed. On the basis of the contradictions and problems identified in the process of research, the pedagogical conditions for the formation of competencies of the future teachers of mathematics in inclusive education were identified.

At the third stage, a scientific experiment was carried out. The results of the experiment were analyzed, systematized, summarized, documented and discussed.

## **Findings**

### ***1. Professional Competencies of Teachers in Inclusive Education***

The study considers the concept of professional readiness of a future teacher for working in inclusive education which should meet the requirements of the current time and take into account the changes taking place in the world. The current situation changes the requirements for a



modern teacher, in particular, a teacher of mathematics and for his/her professional training.

Professional readiness of the future teacher is considered as a holistic education of the individual, integrating the motivational, informative and operational components. The readiness of a teacher for the professional activity consists in mastering the system of special knowledge, professional psychological, pedagogical and scientific-methodical actions and social humanistic interrelations. Such training should include the following aspects: knowledge of the essence of inclusive education, the differences from traditional forms of education; knowledge of psychological patterns and features of the age and personal development of children with disabilities; knowledge of the methods of psychological and didactic design of the educational process for the joint training of children with impaired and normal development; the ability to implement various ways of pedagogical interaction between all participants of the educational environment.

The solution to a wide range of new tasks of inclusive education requires the restructuring and the change of the system of training specialists for education. The need for quick and flexible, fine-tuning and responsiveness in interpersonal interaction makes new demands on the personal characteristics of a specialist and his/her competence. He or she should have high rates of professional social adaptation, personal mobility, empathy, reflexivity; communicative and organizational skills, and be a carrier of humanistic values and ideals.

The analysis of psychological, pedagogical, and methodological literature allowed us to identify the following competencies of the future teacher of math in the context of inclusive education: multiculturalism, humanity, inclusivity, content competence, research competence. Multiculturalism is a competence that expresses a dominant orientation towards the multitude and the diversity of cultural values and norms, as well as their equal rights in education. Humanity is a competence that orients future teachers to respect the personality of the person being educated, accept him/her for what he/she is, educate him/her on the principle of humanism, as well as understanding the diversity of cultures in

the world, forms of self-expression and ways of manifestation of human individuality. In modern pedagogy, the view is increasingly being strengthened that mathematics should be important for humanizing education and the socialization of an individual (Mordkovich 1985). It is often seen as a humanitarian and general cultural discipline contributing to the formation of the spiritual culture of an individual. Inclusion is a competence that orients future teachers to organize a learning process for all children with a focus on children with special needs. Content competence is characterized by knowledge of the problems of education and training of students, understanding the characteristics of the inclusive education, the acquisition of knowledge and skills to work with children with special needs and disabilities.

Teacher's research competence can be defined as the ability and willingness of an individual to independently and effectively carry out research activities, predict its results and apply them in practice in inclusive education. Competencies are related to technologies and methods of working with children in the inclusive educational environment.

## ***2. Pedagogical Conditions and Ways of Forming Professional Competencies***

The theoretical analysis of the problems identified in the research process allowed us to determine the pedagogical conditions for the formation of professional competencies of the future teachers of mathematics in inclusive education.

In the process of formation, it is necessary to reach for maximum consistency, interconnection and interaction of various conditions, forms, methods and means of educational work. So, the first, necessary condition for the formation of professional competencies of future teachers of mathematics is the integration of psychological and pedagogical, methodical and substantive training of students.

This condition is caused by the problem of the discrepancy of academic disciplines which prevents the formation of professional competencies. And this disagreement, as the study showed, manifests itself at all levels including the target, the motivational, the substantive, the

organizational and the activity. The integration function is determined by the fact that it is impossible to achieve a common goal alone.

Integration solves the problem of the gap creating the objective activity of the teacher taking into account psychological, pedagogical, methodical, objective, and mathematical knowledge.

The integration of psychological, pedagogical, methodical and substantive preparation is important as means of forming students' emotional attitude to the world, to knowledge, to oneself; fostering a holistic personality that owns the practice of integrative behaviour.

Possible directions for the implementation of this condition were identified in the process of the study:

1. Coordination of psychological and pedagogical educational disciplines by focusing on the formation of professional competencies of future teachers of mathematics. In our opinion, the basis of such coordination should be the interconnection of the several departments: the teaching department, the education methodology department and the theory and technologies of teaching informatics and mathematics department.
2. Coordination of motivational and stimulating activities of teachers of various academic disciplines. Only by constantly emphasizing the interconnection between subjects and the need for their mutual study, it is possible to form students' sustainable and holistic focus on the intensive professional training for teaching activities in inclusive education.
3. Creation of integrated training courses that combine psychological, pedagogical, methodological and substantive aspects of the professional training of a future teacher.

In the process of preparing future teachers for inclusive education, the forms and methods of work associated with metacognitive reflexive technologies take on special significance in higher education. They should stimulate students' independence and creativity in the synthesis of information and communication technologies,

Therefore, the second condition for the effective formation of professional competencies of future teachers of mathematics is the organization of the educational process using metacognitive technologies with the means of information and communication technologies.

Nowadays metacognitive reflexive technologies are moved to the forefront. These technologies emphasize personality mechanisms of thinking that form intellectual skills and enhance reflexive mechanisms in educational and professional activities. So, when students study individual topics in the course “Technology and Methods of Teaching Mathematics” using game simulation technologies, they use the metacognitive skills they developed earlier and as a result, becoming a “special subject” of analysis and the evaluation of classmates acting as peculiar “observers”. As a result of this assessment, the student receives the opportunity to realize his/her own metacognitive qualities and, if necessary, correct them.

The following areas are identified to implement the conditions:

1. The organization of the educational process using gaming technology and various forms of training (lecture-conference, webinars).
2. Development of students’ projects using information technologies (websites, electronic resources) for students in the inclusive educational environment.

Formation of the professional competencies of a teacher is impossible to implement in the narrow framework of the educational process. The integration of classroom and extracurricular educational work is necessary, which is the third condition for the formation of the professional competencies of future teachers of mathematics. The integration of a classroom, extracurricular teaching and educational work unites into a coherent unity of the various students’ activities and in the process of their development and upbringing. It is a single set of different types of activities such as educational and cognitive, gaming, quasi-professional, communicative, etc., capable of ensuring the adequate formation of professional competencies.

In the process of the study, possible directions for the implementation of this condition were outlined:

1. Coordination of the objectives, content of studies and extracurricular activities and then, the organization of their continuity and mutual development. Studies should be a starting point for a unified system of educational work which determines their character and direction; then educational activities are designed to become a basis of further development and personal understanding.
2. Organization of a unified system of motivation for the process of educational work. In this aspect, the determining role belongs to the subsystem of educational work (visiting children's institutions for children with disabilities, etc.). Their motivational potential is incomparably wider and richer.

In the practice of teacher preparation, it is necessary to note the existing gap between the professional knowledge of future teachers and the ability to put this knowledge into practice. This contradiction gives rise to the fourth condition. This is the realization of the continuity of the theoretical and practical professional training of future teachers of math. This condition is a concrete pedagogical reflection of the dialectical interrelations of pedagogical theory and practice and is interpreted in the study widely - as the continuity between lectures and practical exercises, between the educational process and pedagogical practice.

In the process of the study, possible directions were identified for the implementation of this condition:

1. Implementation of the target continuity of the educational process and teaching practice.
2. Implementation of the organizational and methodological continuity of the professional competencies' formation of future teachers of mathematics in the process of transition from theoretical to the practical professional training of students.

The fifth condition of the formation of professional competencies of future teachers of mathematics is the humanization of pedagogical communication and interaction, the organization of partnership relations, and creative cooperation between teachers and students. Pedagogy of cooperation is a modern pedagogical worldview which is based on the idea of joint development activities of all participants in the pedagogical process, sealed by mutual understanding and penetration into the spiritual world of each other, as well as joint analysis of the progress and results of this activity. On the other side, pedagogy of cooperation is a special pedagogical technology which is a system of pedagogical techniques and tools based on the principles of full interpersonal communication, mutual interest, respect and trust between the participants of pedagogical interaction.

3. Structure and content of the model

On the basis of the identified pedagogical conditions, a didactic model of the formation of the professional competencies of a future teacher of math has been developed in the context of inclusive education. The structure of the model includes components such as target, content, organizational activity, and the evaluative and the effective components.

The target component defined the goals and objectives of the process of preparing the professional and personal readiness of the future teacher of mathematics in the inclusive education. Achieving this promising goal involves solving the following complex of didactic tasks:

- the formation of students' holistic system of ideas and concepts about the essence, structure and content of inclusive education;
- having psychological and pedagogical knowledge; the formation of students' professionally significant personal qualities;
- formation of general and professional competencies, in particular, the inclusive competence.

The content component is revealed in the theoretical, practical, personal readiness of a future teacher. Theoretical readiness is revealed through mastering the volume of theoretical knowledge and skills on the problems of inclusive education. Practical readiness is revealed through mastering a complex of practical skills and skills necessary to work with students in inclusive education. Personal readiness is aimed at the formation of the necessary professional and significant personal qualities of a future teacher.

The organizational-activity component of the model of professional training of future teachers of math involves the integration of psychological, pedagogical, methodical and substantive preparation of students, classroom, extracurricular teaching and educational work as well as the realization of the organizational and methodological continuity of the theoretical and practical professional training of students and practical activities such as:

- educational and practical activities related to the process of learning the basics of inclusive education in the educational process and in the course of teaching practice;
- heuristic activity which means the implementation of intellectual, creative and practical-creative tasks that form creative thinking, cognitive activity, abilities for pedagogical creativity; synthesis of metacognitive technologies with information and communication technology tools;
- research activities which oriented on the organization and the independent search for solutions to problems related to inclusion.

The estimated and effective components of the model contain criteria for assessing the professional competence of the future teachers of mathematics in the context of inclusive education are: cognitive, activity-technological, communicative, reflective, personal.

The criteria allow identifying the levels of development of the professional competencies of the future teacher of mathematics in inclusive education.

#### 4. The experimental verification

The experimental work was done to confirm the hypothesis and the main findings of the study. 50 people took part in the experiment. At the preparatory stage, a plan for the implementation of the experiment was drawn up, and goals, tasks, and stages were determined. The purpose of the experimental study was to test the effectiveness of the model for the formation of the professional competencies of the future teachers of mathematics. The experimental part of the study included ascertaining and formative experiments.

The purpose of the experiment was the identification of the initial level of formation of the professional competencies. At this stage, methods of pedagogical observation, interviews, questioning, interviewing, testing, and control survey were used. The sample was selected using the method of expert evaluation. In total, 50 students of the pedagogical education department of N.I. Lobachevsky Institute of Mathematics and Mechanics of Kazan (Volga region) Federal University were tested.

The results of the ascertaining experiment showed a relatively low level of formation of competences: 61.2% of all surveyed showed a low level, 31.7% - an average level and only 7.1% - a high one. The results showed a weak cognitive component formation. Most of them (over 60%) are poorly aware of the essence of inclusive education. Many students have shown little interest in children with disabilities.

The results of the ascertaining experiment showed the need for organizing purposeful, systematic and consistent work on the formation. The data of the experiment showed the need to develop special pedagogical conditions that allow purposeful formation. These conditions were identified in the course of further research based on the theoretical analysis of the obtained experimental results, scientific and pedagogical literature and the generalization of data from the advanced pedagogical experience. Then, on the basis of the identified pedagogical conditions, a didactic model of the formation of competencies of the future teachers of



mathematics was developed and it was used as the basis for the formative experiment conducted at the second stage of experimental work.

In the process of the formative experiment on the basis of the developed model, a system of measures for the complex formation of cognitive, activity-technological, communicative, reflexive, and personal components was carried out.

Thus, within the realization of the first condition, a system of pedagogical measures for the integration of psychological, pedagogical, methodical and subject training of students of the Faculty of Mathematics was carried out. Hence, the educational material which reflects the basics of inclusive education was added to the content of educational disciplines.

As part of the implementation of the second pedagogical condition in the educational process in a classroom, according to the method of teaching mathematics, it was proposed to develop technological maps of lessons and presentations of different types of lessons by taking into account the characteristics of students with disabilities. The questions related to the characteristics of students with disabilities were included in the discipline “Psychological foundations of teaching mathematics”. The content of the mathematical and methodological disciplines is created using metacognitive and communicative technologies (the development of electronic resources for children with disabilities).

Within the implementation of the third condition in the course of the formative experiment, the integration of classroom, extracurricular and educational work was carried out in order to ensure the holistic formation of cognitive and activity-technological components.

Coordination of educational and out-of-class work of various departments (Department of Theory and Technology of Teaching Mathematics and Computer Science of N.I. Lobachevsky Institute of Mathematics and Mechanics and Department of Educational and Educational Methodology of the Institute of Psychology and Education of KFU) was carried out. In addition, an integrated math lesson was conducted designed to meet the requirements of inclusive education.

The implementation of the fourth condition was aimed at achieving continuity in the theoretical and practical training of students and required

the complex organization of students' activities; the dialectical combination of educational, cognitive, educational-practical, and independent practical activities. The planned result of the organization of students' activity was the achievement of unity in the formation of cognitive, activity-technological, communicative, and reflexive components. As a system-making component of this model, there was an educational and practical activity synthesizing the cognitive and practical activities of students. This activity was organized during training sessions and in the period of pedagogical practice of senior students.

The pedagogical practice created the opportunities for the use of knowledge of inclusive education. In practice, such forms as the organization of discussions, business games, the modeling of pedagogical situations, group discussion and the analysis of students' activities were used.

In the implementation of the fifth condition, a set of measures was implemented to humanize pedagogical communication and interaction, to organize the partnership and creative cooperation between teachers and students. Student-centered pedagogical technologies supported this process. As a result, the activity of students was increased as well as their academic and extracurricular independence was enhanced. The result was the formation of communicative and personal components.

The efficiency of the experimental work was checked by the comparative analysis of the results of the initial and the final stages of the formation of competencies. To ensure the reliability of the results, a sample of students was carried out ensuring the representativeness of the study. As a result, a control group and an experimental group were formed.

The data obtained in the process of the experiment are presented in diagrams.

Start-up diagnostics showed a clear predominance of students with a low level of development of professional competencies (64% respectively in the experimental groups and 60% in the control groups).

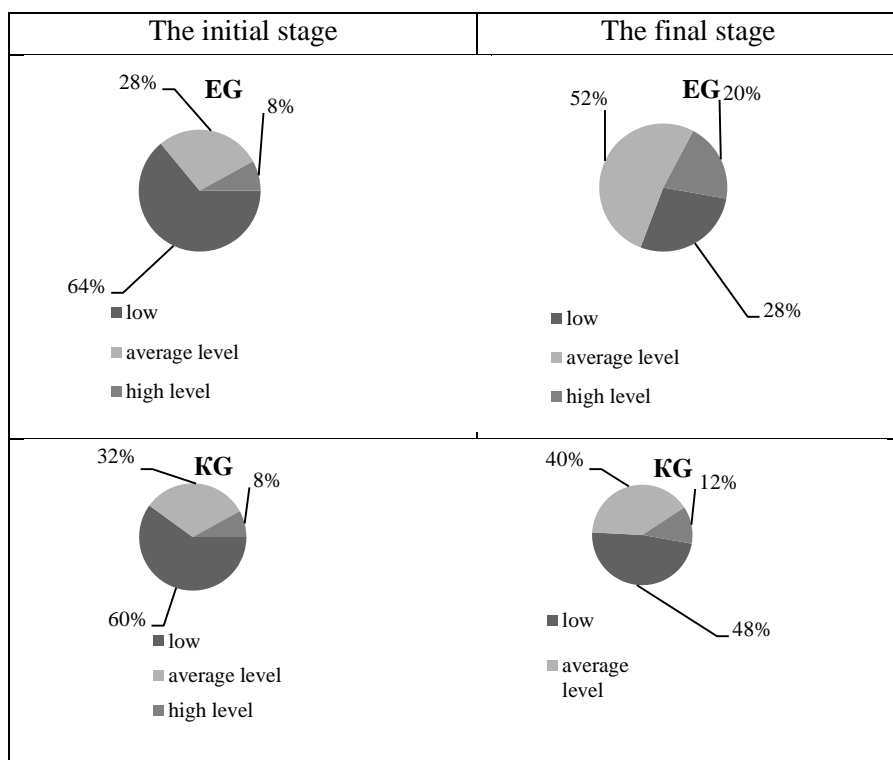


Figure 1. Dynamics of formation the future teachers' professional competencies (%).

As a result of conducting a system of experimental pedagogical events, the number of students with a low level of formation of pedagogical culture decreased in the control group from an average of 60% to 40%, in the experimental group from 64% to 28%. The number of students with high and medium levels of professional competence has increased.

## DISCUSSION

The formation of professional competences of the future teacher of mathematics in the conditions of inclusive education is one of the most significant tasks of preparing a modern teacher. Many researchers (Akhmetova, Nigmatov, & Chelnokova 2014; Cmansker 2010) studied the

problems of teacher training in the inclusive educational environment. They paid attention to the innovative technologies aimed at building relationships between a teacher and students in the new conditions based on dialogue, partnership and cooperation (Razumova, Sadykova, & Yarullin 2017). At the same time, the questions related to the specifics of the formation of the various teachers' competencies, in particular, the mathematics teacher, remain insufficiently studied. The study identified pedagogical conditions and developed the model for the formation of professional competencies. The study showed that the harmonious combination of metacognitive reflexive and communication technologies in the educational process allows the future teachers of mathematics to form the professional competences at the new level and to acquire the skills to work in inclusive education.

## **CONCLUSION**

The study revealed the problems of the preparation process and the formation of professional competencies of teachers in inclusive education as well as clearly and convincingly showed the need to organize purposeful, systematic and consistent work on the formation of competencies of the future teachers of mathematics. The results obtained in the course of systematic and purposeful work showed that the level of formation of competencies meets the modern requirements of education. The materials of the article may be useful for the future teachers of mathematics, graduate students, and lecturers of higher educational institutions interested in the formation of a teacher's pedagogical culture.

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## *Chapter 8*

# **SIMULATION-BASED TECHNOLOGIES IN TEACHER EDUCATION, USING FORESIGHT SESSIONS AS AN EXAMPLE**

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## **ABSTRACT**

In today's world the benefits of using practice-orientated technologies in tertiary education are becoming apparent. These technologies enable future professionals to build their knowledge and skills effectively through engaging in hands-on activities. This approach helps university graduates bridge the gap between their theoretical knowledge and profession-specific practical skills. Simulation-based technologies are among most effective practice-orientated technologies. Kazan Federal University has been using simulation-based technologies for preparing future teachers to work under risk since 2016. These

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technologies provide opportunities for students to experience high-risk professional situations while remaining in a controlled safe environment.

The first stage of the study used a questionnaire and Heim's coping strategies assessment (1995) to identify the scope of the problem and to assess the levels of student preparedness for work under risk. Students demonstrated low levels of behavioral and emotional coping strategies along with an inability to deal with risk. This supports the argument for introducing simulation-based technologies into the system of teacher education. The second stage used pedagogical modeling, including a forum theatre, business games and case-study methods.

In the course of our work we organized an experimental student research group 'Safe educational environment' consisting of first year students enrolled at the programme 'Elementary school education and foreign (English) language.' The new educational model incorporated case studies, business games and a forum theatre. Students were given the opportunity to solve problem-based case studies which later were transformed into the scripts for the forum theatre. The team is currently working towards reinforcing the existing educational model with communication-centered business games. These games have been created by transforming simulation-based games initially designed for the preparation of experts working with survivors.

The close work with the experimental group together with our research efforts enabled the creation of a foresight session technique. Foresight sessions form a unique framework for beginning the work on a particular issue in which various case-studies are solved and reinvented into the ideas for forum theatre performances. A focus group subsequently discusses the results.

The study concluded that simulation-based technologies provide students with behavioral and emotional preparation helping them develop personal traits and noxological<sup>1</sup> competencies necessary for dealing with risk.

**Keywords:** risk-related teacher preparation, simulation technologies, noxology, noxological competence

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<sup>1</sup> Associated with informed risk-taking.

## **1. INTRODUCTION**

### **1.1. Identifying the Problem**

Scholars today argue that recent social and industrial changes have led to the formation of a new prominent feature of today's world – risks and hazards. Scholarly works define 'riskology' (risk studies) and its attributes in a number of ways. A breakthrough has been achieved in risk-oriented education for technological specializations leading to the development of noxology. However, the noxological component of professional education in social sciences remains unexplored. This study examines the issue of effective teacher education to provide the necessary preparation for risk-taking.

Increasing world complexity places new demands on the systems of education which are now expected to help new generations become proactive and mobile. Current teacher education systems, however, often prepare students only for ideal working conditions – for a 'static world' that works in accordance with a predesigned scenario. Teachers need to be engaged in the process of constant development; they need to be able to predict possible shifts, to make rational decisions and to make necessary adjustments and corrections in their work. Thus, the whole system of teacher education requires modernization, specifically for the inclusion of the practices and technologies leading to activity-based learning. In this content we argue that simulation-based technologies need to be included into the system of teacher education.

### **1.2. Literature Review**

Currently, simulation-based technologies are actively employed in the course of professional training. Various aspects of simulation-based technologies for educational purposes have been studied by Verbitskiy (2004), Middlewick, Kettle, & Wilson (2012), Panfilova (2006), Plaksina (2004), Kurkovskiy & Mandi (2008).

Richard Duke (2000) established the foundation for simulation-based (game-based) technologies as an effective educational method and developed practical recommendations on how to organize games to facilitate learning. Middlewick, Kettle, & Wilson (2012) tested the use of theatrical elements (forum theater) in professional education to facilitate the development of communication skills. Within the Russian pedagogical school of thought, the theory and practice of using simulation-based technologies have been significantly developed by Panfilova (2006) and Plaksina (2004). They showed how effective these technologies can be and offered a set of practical recommendations on the organization of educational activities with the use of these technologies.

When looking at the use of simulation-based technologies in professional education it is important to highlight the works of Sinitsyna (2014), a clinical psychologist who specializes in developing the skills needed to deal with risk. In her work 'First psychological aid in educational organizations' she describes the main aspects of work for specialists who help people deal with risk. The book also outlines how student teachers can develop necessary risk-oriented skills.

The foresight method is among the newest forms for organizing simulation-based learning. The method was first conceived 30 years ago and is now actively employed in business and public management. Since early 1990s the most developed countries, such as the UK, Germany, France, the Netherlands, Australia and many others have launched pilot programs for developing foresight methods. Foresight methods can be viewed as part of 'future studies' to develop strategies for looking into the future. According to many Russian and international scholars the ability to predict the future determines the effectiveness of solutions for future problems. According to Peskov (2017) this ability can be employed through the course of three steps: 1) strategic thinking, 2) decision-making in accordance with the selected strategy, and 3) delivering actions in accordance with those decisions. The author highlights foresight as a method that is mostly about strategic thinking, and to a lesser degree, about making decisions which are pre-determined by a particular strategy.



Poli (2018) views foresight as a ‘tool to foresee’ the future, to evaluate trends and manage risks. He describes its advantages in comparison to other methods.

The next important factor confirming the effectiveness of the foresight method is group work, collaborative modeling and decision making. Knyaginina (in Peskov, 2017) noted that the unique potential of the foresight method stems from the fact that future is always open-ended and has multiple paths and as such it depends on the actions on the majority. ‘There are always “revolutionaries” who initiate technological revolutions but society as a whole reacts only to the mainstream technological changes. Those who are ‘playing’ the technological market are aware of what is becoming mainstream. In order to trace how their collective vision is changing, foresight sessions need to be organized every year.’

The foresight method has also been gradually gaining popularity in the Russian Federation. For example, a new public initiative ‘Foresight Russia’ has been proposed by the members of the presidential programme for preparing leaders and managers headed by Dmitry Peskov. At this stage this initiative is being implemented in more than twenty of the largest Russian cities. Our article illustrates how the foresight method can be effectively used in the course of preparing teachers for professional risks.

## **2. METHODS**

### **2.1. The Research Task**

The main purpose of this research is to study the growing potential of simulation-based technologies (taking foresight sessions as an example) in the context of preparing teachers for potential professional risks. We also aim to determine the conditions for the effective applications of simulation-based technologies within the university.

In accordance with this purpose we set the following objectives, to:

- 1) Conduct a comparative analysis of the latest approaches in the area of simulation-based learning.
- 2) Formulate the theoretical foundation for simulation-based learning in general and for foresight sessions in particular.
- 3) Identify the structural components of foresight sessions and to design them with an inclusion of a noxological component.

## **2.2. Theoretical and Empirical Methods**

The study used comparative analysis and pedagogical modeling (educational model-based design) based on a theoretical framework derived from various seminal works of Russian and international scholars writing about risk-oriented professional education (Abramova, 1996; Devisilov, 2011, Prichinin, 2016) and simulation-based learning in professional education (Panfilova, 2006; Plaksina, 2004).

The systematic activity-based approach lies at the core of using foresight sessions to enhance risk-oriented teacher education. The process of introducing an educational model-based design led us to identify the following four principles of a well-functioning model: activity, consistency, linking theory and practice, and transparency within collective learning and individual learning processes.

## **3. RESULTS**

We organized an educational model – an experimental student research group ‘Safe educational environment’ comprising first year students enrolled in the programme ‘Elementary school education and foreign (English) language.’ This educational model incorporated foresight sessions. The model for organizing the work of the problem-focused student group ‘Safe educational space’ has been described and discussed in earlier publications (Kong, Kayumova, and Zakirova, 2017; Kayumova, 2016); this article presents our experience of using foresight technologies

in the course of teacher education (using the example of the foresight session ‘Child Online’ conducted on the 28th of November 2017).

A foresight session (Foresight is an English word that means looking into the future, prediction) is a social technology - a form of communication which enables participants to plan and agree on future actions necessary for achieving their goals.

At the core of this method is participants’ collaborative work with a focus on a particular issue, a set timeline, predetermined goals and imagery.

The foresight methodology always involves four levels of activities:

- the present (working with cards, opinion exchange, moderation);
- the future (prediction methods, working with perspectives);
- planning (strategic analysis, setting priorities);
- networking (tools aimed at facilitating participants’ dialogue and cooperation).

Rapid Foresight (RF) is a widespread technology in Russia. Rapid Foresight is the Russian version of foresight technology developed by the group *Re-engineering futures* (<http://refuture.me/>). This technology makes it possible to achieve representative results more quickly in comparison to the classical foresight technology.

Using the RF methodology results in the map of the future. This is a visually rich space that enables one to see the subject area as a whole, to understand how it might look in the future, as well as to discern different ways of achieving desirable states and factors that influence the likelihood of the various scenarios (versions) of the future. The map of the future can be easily transformed into a goal-oriented road map which is not just the visual projection of the collective future that reflects current trends, predictions of technological development, strategic forks, and events, but also contains decision making milestones to set in motion specific social and technological actions or the plan for legislative and lobbying measures.

We can view the system of education as a giant company that works on the national level and is coordinated by the Ministry of Education. This

company has various experiences (ups and downs), sets trends and faces difficulties. The product of this company is extremely important for the whole world because it defines the development of new generations.

Following this metaphor, it is reasonable to conclude that teachers need to be, first and foremost, moderators who are capable of seeing educational processes from different perspectives, seeing potential threats and predicting educational trends. In view of this we propose enhancing teacher education programs with foresight-oriented simulation-based technologies.

Next, we move to the description of the four stages of the methodology (using the example of one of our foresight sessions).

#### *Stage 1 - Pre-Foresight.*

Preparing for a foresight session involves the following:

- a topic-focused literature review (aimed at finding various international perspectives on the related topics, including previously organized foresight sessions);
- collecting and analyzing statistical data;
- analyzing what has been said by recognized influencers in the field;
- analyzing public opinions expressed on social media and open forums.

Our preparation work enabled us to see how social media influences personality development, and more specifically, how destructive groups influence children in a negative way. The topic we selected was particularly important for the education system, “Child Online.” Too often children fall victim to the criminals operating on the Internet. One of the saddest examples we have seen is Blue Whale – a ‘death group’ disguised as an interactive game on social media. The main goal of this group is to gradually and systematically push children towards suicide.

*Stage 2 – Expert Group Selection.*

The most competent participants representing a diverse range of views join the group of experts.

Various representatives of higher education involved in running teacher education programs (representatives of the Novice Teachers Union, information security experts, representatives of the Youth Council on Anti-terrorism organized by the Government of the Republic of Tatarstan) were selected for our expert group. The Youth Government project was implemented in the Republic of Tatarstan in 2016. The Youth Council on Anti-terrorism works within the Youth Government, studying youth trends and working on the prevention of internet-based extremism.

The selection of expert was carried out using the following approaches:

- Customers' expert analysis, customers' beliefs about people's expertise. In our case the local teaching community (represented by the Novice Teachers Union) is the main 'customer.'
- Searching for the authors who published materials on the topic (including posts and publications on social media).

*Stage 3 – Generation – The Foresight Session.*

Every foresight session combines many tools. The 'classical' approach to organizing foresight sessions is based on the analysis of large amounts of data (surveys, essays, etc.) conducted through multiple focus-group discussions and individual feedback collection. This means that organizing foresight sessions is time-consuming and costly.

Figure 1 illustrates how this stage was implemented in our foresight session.

The point of departure is the problem of 'Children's exposure to "death groups" on social media.' In the pre-foresight stage, we distributed topic-related methodological materials among the participants (legislative documents related to information security, methodological recommendations developed by psychologists and educators, and various news items taken from mass media).

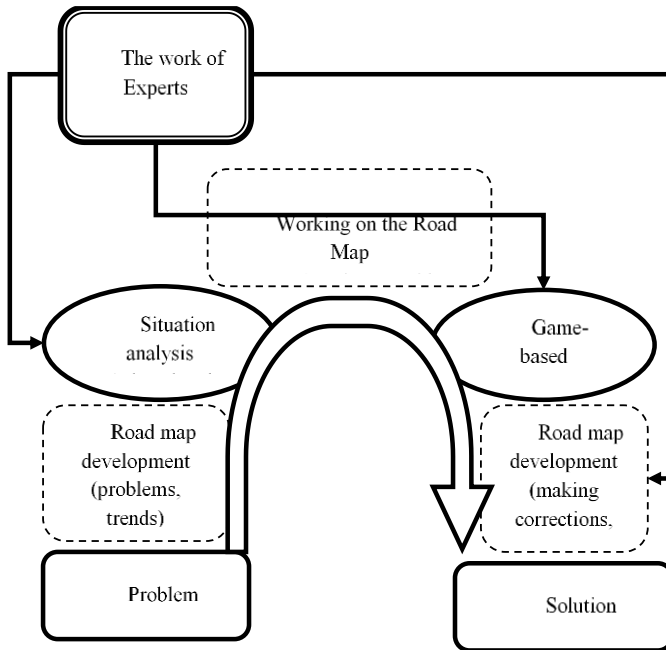


Figure 1. The scheme of the ‘Child Online’ foresight session.

For the generation stage we divided participants into working groups. Each group included student teachers and in-service teachers. Then we announced the topic (the main problem) to participants. Through group work participants developed the first draft of the road map: the first overview of the problem was formulated (highlighting how each group understood the problem), and the main trends were defined.

Then participants then started work on the case-study. Various solutions were considered and analyzed by the expert group – they assessed solutions from the point of view of jurisdiction and higher education. After this the road map was enhanced with possible solutions and methodological recommendations.

The next stage involved game-based simulation. We used forum theatre because it enables participants to immerse themselves in particular risk-charged situations and gain new emotional and behavioral experience. In preparing the performance, the participants’ immersive experience was ensured by asking the actor-participants to develop their scenario and roles

themselves, and the audience-participants changed the course of performance when risk situations arose. Forum theatres have two parts - forum and theatre. First, the theatrical part is implemented – a problem-based situation is presented. In our case we focused on the situation of children being pushed towards suicide. Then comes the forum part in which every step in the action plan is examined. The actions of every character are considered and their motivation is analyzed. The expert group can join the game-based simulation and participate in the forum. At the end of this stage the road map is developed further.

At the final stage of the foresight session we discussed the road maps developed by all the micro-groups. The final road maps contain problem solving algorithms for specific situations.

## CONCLUSION

Our system of education is currently going through dramatic transformations. These changes are influencing both the content and the process of education. The fact that risks within the education system are becoming more prevalent makes it important to transform education in order to include a specialized psycho-pedagogical component to ensure teachers' preparation to prevent and deal with risks. This can only be achieved if simulation-based technologies are introduced into the educational process. These are designed to help prospective teachers acquire not only theoretical knowledge but also emotional experience of dangerous situations. This article examines one of these technologies – foresight sessions.

Foresight sessions offer a unique framework for working on a particular topic. Our literature review and empirical work enabled us to develop the algorithm for organizing foresight sessions within teacher education programs. There is great potential in using this technology for preparing teachers to deal with risk.

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*Chapter 9*

**MODIFICATION OF PRACTICAL TRAINING  
PROGRAMS IN PEDAGOGICAL  
MASTER COURSES: IN PURSUIT  
OF PROFESSIONAL DEVELOPMENT**

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**ABSTRACT**

This study examines the increasing need to improve the quality of practical training in a pedagogical master's course, modifying the practical pedagogical training, and bringing it in line with the requirements of Federal State Educational Standards of Higher Education. The research goal was to substantiate theoretically and test

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experimentally the effectiveness of the content of practical training in the master's course as a means of increasing professional development, motivational activity and the attractiveness of the teaching profession. It also determined the feasibility of using relevant content of practice-oriented learning technologies through an experiment at KFU. It included an analysis of the philosophical, psychological and pedagogical literature, a reflective and systematic analysis of pedagogical activity, a study and synthesis of innovative educational experience, polls, and interviews. The authors prioritize the modification of the practical programs, give a description of the practical training content, and discuss the pedagogical conditions for implementing practical work contributing to the effectiveness of the professional and creative development of future teachers. They explore the essence of practice-oriented learning technologies, which improve the educational experience, and scientific and academic potential development of graduate students. These results are helpful to researchers, teachers in higher educational, and supervisors of teaching practice. They have informed the development of curricula and content of practical training programs of pedagogical master's course at the Institute of Psychology and Education of Kazan Federal University, through the implementation of the content-related and procedural aspects of the practical teacher training in a classical university.

**Keywords:** modification, program, practice, master's course, teacher education, technologies

## INTRODUCTION

### **Teacher Education: Development Priorities**

The transformation processes taking place today in the system of domestic pedagogical education prioritize the quality of initial training, the professional development of future teachers within the framework of theoretical and practical university training, increasing the level of motivational activity, and shaping their overall commitment to the teaching profession. The priority ranking of these areas is not accidental: the modern Russian school is characterized by an acute shortage of the teaching staff, and an insufficiently high level of pedagogical competence of new entrants into the teaching profession in secondary school.



According to the expert assessment of the All-Russian People's Front and the "National Education Resources" Public Monitoring Fund, Russian schools lack teachers of mathematics (44%), a foreign language (39%) and the Russian language (30%), and primary school teachers (26%). Moreover, since the beginning of 2015, the number of teachers in Russia with two full-time jobs has doubled - from 6.9% in 2015 to 13.8% in 2017. Added to this shortage of teachers is the problem of young teachers' professional and methodological competence, which is required to keep universities curricula and educational programs up to date, both at the undergraduate and graduate levels. The use of technology in practice-oriented teaching is a high priority (Slastenin, 2008). A comprehensive approach to these problems has been implemented with the help of state support (the concept of long-term social and economic development running until 2020, the National Doctrine of Education in the Russian Federation running until 2025), the implementation of federal programs aimed at increasing competitiveness and the practical orientation of a higher pedagogical school with the priority of attracting more motivated students (see Shim, 2008; Kalimullin, Vlasova, & Sakhieva, 2016; Valeeva & Amirova, 2016). The state, society, and higher education place special expectations on master's students. The holder of a master's degree is expected to ensure the success of the school's educational process, and must be competent in pedagogical design and the implementation of research and management activities. Therefore, when organizing professional training for master's teachers, it is important to involve students in real pedagogical activity, through effective practical programs in educational institutions, to ensure intra-level and inter-level continuity of practical training programs, to create conditions for implementation of the creative potential of students, and to use practice-oriented technologies (for example, for educational dialogue, project activities, and contextual learning). These technologies have powerful didactic potential, and contribute to students' competencies through their study at a higher educational institution. Meeting these objectives is not possible without building a model for cooperation of all participants in practical training, to support them in the collaborative selection of content and training

technologies, methods for evaluating practical achievements, for reflection, and mutual support throughout the learning process.

## **PURPOSE AND OBJECTIVES OF THE STUDY**

The study sought answers to the following questions:

- How can the modified practical training programs, and updated content of the practice affect the level of professional development and motivational activity of students, and the attraction of the teaching profession for master's students on the pedagogical course?
- What pedagogical conditions should be created in the implementation of practical training in the university to ensure the effectiveness of the educational process, and the professional and creative development of future teachers?
- How advisable is the use of practice-based learning technologies in the organization of practical training in educational institutions?
- To what extent do they contribute to obtaining the teaching experience, building research, scientific and the pedagogical potential of graduate students?

This nuanced study involved polls and interviews that were carried out with two groups. The first group of students (n=23) had a bachelor's degree in "Pedagogical Education," while the second group (n=29) held a bachelor's degree in another field of education.

The main objective was to substantiate theoretically and then test experimentally, the effectiveness of the content of practical training of pedagogical master's students for increasing their professional development, motivational activity and attraction to the teaching profession. It also sought to determine the feasibility of using practice-oriented learning technologies relevant to the Kazan Federal University (KFU) course. The research tasks were to: 1) substantiate the priorities

given to modifications to the practical training programs in the pedagogical master course, and to describe the updated content of these programs, 2) identify the pedagogical conditions for implementing the practices that contribute to building up the creative potential of students and the effectiveness of future teachers' professional development 3) explore the essence of practice-oriented learning technologies, to provide the acquisition of teaching experience, and build the research, scientific and pedagogical potential of graduate students.

Contradictions (i) between the shortage of teachers in educational institutions, an inadequate level of pedagogical competence of university graduates and the requirements placed on teachers by the state (the FSES) and society, and (ii) between the traditional organization of practical master courses (concentrated practices, optionally linking the practical content with graduation thesis, theoretical disciplines, curriculum modules, isolation between practicals, the participants' autonomy in practical training, limited time for reflection, work at the "middle ground," etc.) and the complication of the state educational standard. The latter implies the formation of complex competences including design and management of the educational process (coping with the individualization and differentiation of training) for graduate students intending to become educators. These competences include:

Scientific research into the development of digital educational resources is extremely relevant to innovative content in practical training for graduate students in a pedagogical university for:

- Modification of the practice programs (the content aspect),
- Building new organizational models for teaching practice,
- Highlighting the pedagogical conditions for their implementation,
- Selecting relevant learning technologies (the procedural aspect) to increase the level of students' professional development, motivation and attraction to the teaching profession.

In solving the problem of updating the practical training content to meet the requirements of the FSES and social needs, it is important to set

priorities for modifying the practical programs, to specify their content, to identify the pedagogical conditions for their implementation in order to contribute to the effectiveness of the future teachers' professional and creative development, and to explore the essence of practice-oriented learning technologies that ensure the acquisition of teaching activity experience, development of research, scientific and pedagogical potential of graduate students.

## LITERATURE REVIEW

These issues have been studied by both domestic and foreign researchers (Robinson, 2006; Darling-Hammond, 2012; Furlong & Smith, 2013; Margolis 2014). Research shows that when organizing practical training, special attention should be paid to the timely modification of practical programs at all levels of pedagogical education (Isaeva & Shikhova, 2014; Koshman, Razumenko & Khomyakova, 2015). Addressing the requirements of the Federal State Education Standards (FSES) for teachers' professional standards and the requirements from the state and society, teaching practice allows students to enter the teaching profession, get used to it (adaptation phase), acquire professional experience (interval phase), and then to work in a competent manner (mastery phase) (Darling-Hammond, 2005; Zeer, 2012). These researchers emphasize that the creation of a cooperative system involving all participants of practical training, implementation of a joint selection of content and learning technologies, evaluation methods for practical achievements, and full mutual support throughout the entire learning process, contribute to the effectiveness of the practical and professional development of future teachers (Moran & Myringer, 2002; Senge et al., 2012). The formation of professional knowledge, skills and abilities in teaching and the organization of educational activities in school is a complex process which is influenced by a large number of important factors that must be considered when modifying practical programs. The literature analysis shows that developing graduates' competencies and

practical skills for their pedagogical activity should be aimed at classroom development. It is necessary that the professional is appropriately prepared to be a knowledge mediator. To this end, research suggests educators encourage discussions on curriculum reform for those specifically trained to teach (Figueredo et al., 2017). All the suggestions offered by researchers to teacher educators are focused on ways to incorporate candidates' skills and knowledge into their programs to assist them to become effective teachers (Brown, 2010), to help them better relate to scientific content, and to increase their confidence in their own teaching abilities (Markowitz & DuPre, 2007). From comparative research, scientists have concluded that the definition of quality parameters and efficiency models highlights the main elements of models of teacher training duration, curriculum (disciplinary training, teaching and practice) and the induction process. They note the common objectives of teacher training. The training structure has a professional orientation and aims to train future teachers as mediators between socio-personal development and learning, as well as the formation of citizens capable of making decisions, autonomous and critical within society (Ries et al., 2016). Revising practical teacher training programs implies updating the technological components of the educational process. The analysis enables conclusions to be drawn about the importance of practical training in relation to the preparation of future teachers in university, their professional development, and their motivation.

## **METHODOLOGY**

The study involved an analysis of the philosophical, psychological and pedagogical literature, and a reflective and systematic analysis of pedagogical activity with a study and synthesis of innovative educational experience using polls and interviews. The experimental work involved 52 students on the pedagogical master course of the Institute of Psychology and Education of Kazan Federal University. Group 1 (n=23) had a

bachelor's degree in "Pedagogical Education" while Group 2 (n = 29) had a bachelor's degree in a different field of education.

## RESULTS

### **Priorities for the Practical Training Programs Modification**

The new FSES, indicates that the "Practice" block in the master course program should have at least 40 credits, i.e., 1,440 hours or 33% of the total program scope. This gives a starting point for the obligatory practice-oriented nature of training in pedagogical master course training, for the special role of practice in professional development and the development of future teachers. According to the standard, within the framework of studying a master course program, graduates can prepare for solving various professional tasks: pedagogical; project-oriented; curricular; organizational and managerial; cultural and educational; scientific research; and maintenance. This format allows the student to select content to favor particular types of activity. Each of these is complex, multifaceted and requires a phased, consistent development with a gradual complication of goals and objectives in the progression from one type of practice to another. Moreover, it requires a detailed, in-depth presentation of the methodology of these activities, as well as matching the many assessment tools in theoretical disciplines with practical content. The revised FSES offers new types of educational and workshop practices in the pedagogical master's course. When establishing the rationale for practical training, it is important to take into consideration the type of practice, its format, and general professional and professional competences. The continuity of all practices must be observed, to ensure the increasing complexity of the content of practical training, and links with scientific research activities at the university. An integrated approach to the organization of practical training enables us to provide a reserve of study time. A process approach is required for the effective coordination for the interaction of all the practice agents when revising the programs. This allows us to achieve

intensification of education and ensure training effectiveness through adherence to a high level of corporate culture, monitoring the learning process, and a constant support for participants of the educational process. Thus, the main priorities for modifying the practical training programs in the pedagogical master course are:

- increasing the level of complexity of the practical content,
- ensuring a reserve of study time,
- developing the competence and practical skills of the graduate students in relation to pedagogical activity, and
- intensification of the university learning process.

### **Pedagogical Conditions for Implementation of the Practicals**

These priorities can be implemented by adhering to the following pedagogical conditions: i) the compliance of practice programs with the FSES, regarding professional standards and the needs of the modern school, ii) ensuring the intra-level and inter-level continuity of pedagogical practices programs with gradual complexity in the competences needed (Margolis, 2014), iii) unification of types and terms of practical training to give continuity, iv) implementation of the cooperative model for organizing practical training. While ensuring the intra-level and inter-level continuity of the pedagogical practices programs as the competences become more complex, it is important to combine the efforts of the organizing university and the educational “host for practice.” Analysis of the literature reporting many years of experience allowed us to assume that the intra-level and inter-level continuity of the pedagogical practice programs should be based on the unification and implementation of the following areas: i) orientation (unification of the goals and objectives of training and education at different levels and stages of the educational process); ii) content (unification of interpenetrating trajectories in the content, in the system of ideas, concepts, skills and abilities, and elements of cognitive experience. This must take into account interdisciplinary

connections, based on a continuous spiral development of all the named content aspects targeted to complicate the competency based field); iii) constructive-design (selection and organization of educational material, design of the practical activity of graduate students); iv) methodological and technological (continuity of forms, means, methods, innovative and interactive teaching methods); v) psychological (reliance on self-organization and self-control processes, and the pursuance of the individual's pedagogical self-actualization); vi) organizational (the graduate student's active involvement in the pedagogical process and stimulation of their activity and creative abilities through inclusion in pedagogical activity); vii) informational (ability to explain information easily, expansion of the information field); viii) communicative and stimulating (formation of moral culture and goodwill); ix) analytical and evaluative (analysis of the training course and education through a variety of assessment tools for the development of a professional module, reflection); x) research and creative (understanding and creative development of pedagogical theory, generalization of advanced pedagogical experience, and a search for new ideas).

The design and implementation of a cooperative model for organizing practical training for pedagogical master course students with a general focus on the "quality of teaching experience" was also identified as one of the conditions for the implementation of the revised practice programs. This model involves the "ministry-university-school" network interaction, using distributed practices with the aim of a transition to the system of clinical teacher training, as well as the introduction of new forms of evaluating educational results. In cooperative learning, it is important to instill in students such qualities as integration and innovativeness, the ability to work in a team, to generate interest in the subject, and induce a creative attitude towards professional and educational activities. In the process of educational counselling (both group and individual counselling) it is advisable to identify and eliminate substandard work. When implementing a cooperative model of organizing practicals, it is important to comply with certain stages of the teamwork of all the participants, paying particular attention to students' reflection, involving them in the



work at the “middle ground,” and initiating active professional interaction. The distributed practice format, implemented in close cooperation with educational institutions, offers the possibility of moving to a system of clinical teacher training, ensuring the unification and interconnection of the master course program and practice placement.

### **Practice-Based Learning Technologies**

Practicals in the pedagogical master course of the Institute of Psychology and Education at KFU use the network facilities of the University, the Ministry of Education and Science of the Republic of Tatarstan, schools of the city of Kazan and the Republic of Tatarstan. The KFU Lyceums, (which are part of the university structure) are used for practice placements for most of the graduate students. From their first days of training, students are placed in an educational institution. The practices are distributed and this allows the implementation of contextual learning technology that immerses a student in the educational environment of the school. Pedagogical counselling (educational dialogue) during teaching practice is an essential factor in training effectiveness, strongly affecting the development of the future teachers’ professional identity. Close cooperation with the KFU lyceums is reflected in the project activities in which graduate students are involved during their practice placement. The University lyceums implement dozens of projects aimed at the holistic development of a student’s personality. The main advantages of the project activity are its research and cross-curriculum nature, and its proximity to the specifics of their future profession. This presents a difficulty in implementation, since effective work on a project requires deep mastery of material from various non-related fields. In order to improve the efficiency of project activities in the university, it is important to involve employers as customers or consultants in the development of projects topics and project implementation. This helps to align the graduates’ professional qualifications with modern labor market requirements. The innovative and unique solutions emerge in the course of project activities.

The use of contextual learning technologies, educational dialogue and project activities enhances students' creative potential, allows them to operate in the real educational environment, to competently carry out scientific research and pedagogical design, to identify difficulties in implementation of educational activities, and to find the best ways to overcome them.

## **Practice Effects**

The assessment of the revised practical training for first year students on the new format pedagogical master course was carried out through polls and interviews. It showed that there was an increase in the importance of practice compared to the bachelor level in two groups tested. The increase in the "high significance" parameter for Group 1 (with a bachelor degree in "Pedagogical Education") was 6% while for Group 2 (with a bachelor degree in another field of education) the corresponding increase was 7%.

"I have only positive impressions from the practice that we had at KFU lyceum. School experience helps us to work out the theory in practice, to be the prime mover of ideas and solutions, an active organizer and participant of events" (the 1<sup>st</sup> year master course student).

Both groups of students responded positively in the assessment of the practices potential in acquiring experience of professional activities. (Group 1 - 72%, Group 2 - 77%)

"The Lyceum has all the necessary conditions for students practice placement. The administration and teachers welcomed us warmly, provided the necessary support. Teaching practice had a positive impact on the development of my professional skills" (the 1<sup>st</sup> year master course student).

There was a positive assessment of the format of distributed practices (Group 1 - 53%, Group 2 - 50%).

When evaluating practice-oriented learning technologies, the majority of respondents in both groups indicated the importance of using them in a complex (Group 1 – 53%, Group 2 - 41%).

According to the Group one students, participation in project activities during practice allowed them to master the culture and ways of managing projects more fully (24%), and learn how to work in a team (24%). For Group 2 students the project activity allowed them to develop the skill of analyzing problems and setting goals (29%). The absence of measurable results was reported by 15% of the respondents in Group 1 and 4% of the respondents in Group 2. This can be explained by the fact that Group 2 had little experience in implementation of pedagogical projects and perceived this activity with greater interest, because it was new for them.

21% of students in Group 1 emphasized that project activities were complex and required additional knowledge and skills. However, 36% of the same group admitted that it was significant and allowed them to evaluate their own contribution to the project. The results for the second group were similar: 37% of students indicated the complexity of project activities, while 48% spoke of its importance.

“I came across a project activity for the first time; during my undergraduate studies, we had not had such experience. It’s great that we were able to implement our thoughts and ideas. Project activities contribute to self-education. Knowledge that was given to us at the university, and the advice of teachers helped us to cope with the difficulties” (the 1<sup>st</sup> year master course student).

“Project activities are conducted at the highest level in Lobachevsky lyceum. I was lucky with teacher N, who is the head of the school museum. During practice you fully immerse yourself in the life of the lyceum, and during the performance of individual tasks you become a part of the extracurricular and innovative activities of the school!” (the 1<sup>st</sup> year master course student).

Interactive learning was also positively received with 29% in Group 1 emphasizing that feedback helped to interact professionally with the

practice supervisors from the school and the university. In Group 2, 26% noted that interactive learning is more motivating, allowing them to communicate with all participants in practical training at school. In Group 1, 29% believed that the strength of contextual education is that it allows them to fully be engaged in educational and professional activities and master the content of the practice program effectively. For Group 2, 23% agreed that contextual education had contributed to their professional development.

“In the lyceum, I gained pedagogical experience and got acquainted with various methods of teaching history, which is useful to me as a future teacher” (the 1<sup>st</sup> year master course student).

Analysis of the research results indicates that students who do not have a bachelor degree in pedagogical education set a high value on the significance of practice, since it allows them to address the lack of professional skills in pedagogy through complete immersion in the educational process at school. Through the interviews with the second group it appeared to be that most of them spoke about the difficulties they had to face during practice and overcome together with supervisors, tutors, and group mates.

“During practice, I did not have enough methodical training, sufficiently developed skills, abilities to carry out project activities. There were difficulties in interacting with students.”

## CONCLUSION

The revision of practical training programs to incorporate an increase in the level of complexity of the practices content, ensuring a reserve of school hours, developing competencies and practical skills in relation to pedagogical activity, and intensification of the university learning process, has a positive effect on students' professional development, contributes to

their motivational activity, and enhances the attractiveness of their profession. These teacher education practice programs meet the requirements of the FSES with respect to professional standard for teachers, and the needs of the modern school. They provide intra-level and inter-level continuity of the teaching practice programs, a unification of types and terms of practice, as well as the implementation of a cooperative model of practical training for graduate students. The new programs use contextual education, project activities and educational dialogue to ensure the acquisition of the teaching experience, and scientific and pedagogical capacity development of graduate students.

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*Chapter 10*

**ASSESSING STUDENT TEACHERS' ABILITY  
TO DESIGN AND CONDUCT CLASSES**

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**ABSTRACT**

There is a need to improve the practical aspects of educational programs and to develop the criteria for assessing student teachers' competencies. The aim of this research was to analyze the existing system for competence assessment, determine the criteria to identify students who fail to demonstrate an adequate level of professional competencies and to identify potential areas for further development of students' competencies. Much of the data came from the evaluation and statistical analysis of students' final reports on their teaching internship. The chapter discusses criteria and parameters for the assessment of student teachers' competencies in designing and conducting classes. The the

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analysis of students' ability to design and conduct classes at the end of their first teaching internship enabled the identification of the parameters that met threshold and below-threshold values, and of potential areas for further development ("weak spots").

**Keywords:** teaching internship, professional competencies, assessment of competencies, ability to design and conduct classes

## 1. INTRODUCTION

### 1.1. Identifying the Problem

There are many attempts on the modernization of the pedagogical education system in Russia. The aim of the modernization is to help student teachers to develop the competencies and skills that will be crucial to their future teaching career. These are outlined in the professional standard for teachers (The Ministry of Labour and Social Protection of the Russian Federation 2013).

The primary aim of the master's programs in education is to emphasize the professional aspects of teacher training. These programs implement a model of practice-oriented education intended to develop the competencies which are outlined in the Federal Education Standard for master's programs for student teachers (The Ministry of Education and Science of the Russian Federation 2010).

Federal Standards for Higher Education stipulate that master's degree programs should be primarily focused on the development of certain personal and professional competencies. Professional competencies mean the ability of undergraduate/postgraduate students to apply their knowledge, skills, and personal qualities for successful teaching practice. These competencies are divided into two categories: professional competencies and general professional competencies.

All the professional competencies outlined in master's degree programs are divided into six functional groups. These describe the main aspects of professional work and cover the following competencies:

- pedagogical work;
- research;
- project activities;
- methodological work;
- managerial work;
- awareness-building activities.

Graduates with bachelor degrees should be able to implement educational programs. In contrast, master's degree graduates should be able to do more, for instance, to improve existing programs and design new ones.

During the implementation of innovative projects in teacher education in 2013-2017, new requirements for educational programs were proposed. To meet the requirements for teachers' professional standards, these relied upon the activity-based teaching method and the professional aspects of educational programs (Margolis, 2014). During the final stage of the modernization the main task was to help student teachers to develop competencies and evaluate their progress.

A teaching internship examines the students' ability to perform professional tasks. Since a master's programs is the second step in acquiring professional skills, it can be assumed that these students already have a certain level of competence. Since the transition to the three-step education system is a new phenomenon in Russia, some master's students who already have a bachelor's degree in pedagogy can demonstrate a high level of competencies, while others have no previous knowledge of pedagogy. In order to avoid inconsistencies in students' pre-existing skills and knowledge, a preliminary module was introduced into master's programs. This module helps students to fill gaps in their pedagogical knowledge. It should be noted that all master's students undertake their teaching internship at the same time. The main task for the supervising teachers is to assess the level of bachelor students' competencies. As a result, these teachers can identify the themes that they should discuss with other master's students.

## 1.2. Purpose and Objectives of the Study

The Research was Carried out Five Stages.

The *first stage* was concerned with the analysis of the federal educational standard 44.03.01 “Pedagogical education” (bachelor’s degree), to determine the expected entry-level competencies and to specify them in detail. The essential competencies from the Federal Educational Standard 44.04.01 “Pedagogical education” (master’s degree) were identified.

In the *second stage*, specific practice-oriented situations were developed. The tasks for the first teaching internship were based on these situations

*Third*, in order to establish the level of students’ competencies, a system of criteria and parameters was designed, based on the analysis of the reports submitted, evaluations of the classes that were conducted, and on self-assessments.

At the *fourth*, diagnostic stage, the pedagogical competencies were assessed.

At the *fifth* and final stage of the research, the qualitative and quantitative analytical procedures having been completed, potential areas for further development of students’ competencies were proposed.

The aim of the research was to analyze the existing system of competency assessment, determine the criteria for identifying students who demonstrate a threshold or a below-threshold level of professional competencies, and to identify potential areas for further development of students’ competencies.

## 1.3. Literature Review

The process of how students obtain professional competencies is currently one of the most important fields of research. The formulation of the main paradigm for the competency-based approach (Zimnaya, 2003) and the development of static and dynamic competency-based models



(Khutorskoy, 2003) have led to various definitions of competencies. Shadrikov (2004) discusses the creation of a uniform interpretation of competencies and the development of methods with the potential to formulate them. These methods include survey and methodological tools (Baydenko, 2005). Other topics under investigation include competency-based standardization and assessment of the quality of education (Subetto, 2006). According to the Bologna Process (Khrapal, 2010; Yefremova, 2010) an effective definition of competencies and the definition of requirements for competency assessment is needed for the design of competency-based models for graduates. Higher education is oriented towards the development of the professional and personal competencies outlined in the educational standard. However, attempts to develop a uniform system to assess professional and personal competencies of students are still in progress.

Psychological and pedagogical literature indicates a lack of studies on the evaluation of pedagogical competencies, as well as on the validation and interpretation of evaluation. Attempts are being made to define competencies that are relevant to the new educational system and to each participant in the educational process (Donetskaya et al., 2017). Furthermore, researchers are trying to establish criteria that will reflect the competency level and show how it changes as a student completes a module of the master's program (Asafova and Golovanova, 2017). Finally, qualitative approaches to the evaluation of educational results are being developed (Telegina et al., 2017).

## **2. METHODS**

A number of complementary methods were used to achieve the research aim. The plan of the first teaching internship was developed through an analysis of federal education standards of bachelor's and master's pedagogy programs, the detailed evaluation of current and expected levels of students' competencies, and the development of specific tasks for the teaching internship. A design approach was used to develop

and evaluate a system of criteria and parameters that could be used to assess the level of competencies. Students' reports on their first teaching internship were studied to obtain empirical data. The assessment of the level of pedagogical competencies was based on parameter-based assessment, descriptive statistics and mathematical treatment of experimental data (including a graphical representation of the results, interpretation, and quantitative analysis of the data). Teaching experiments in the Institute of Psychology and Education of Kazan Federal University were also carried out.

### 3. RESULTS

The research involved 132 master degree' students. Of these, 79 had a bachelor degree in pedagogy, 41 had a bachelor degree in non-pedagogical disciplines, and 12 had a specialist degree and teaching experience. The initial assessment showed that the number of master's students reaching the competencies threshold level was relatively high (21.1%), 54% of the students demonstrated a basic level of competencies, and 24.9% demonstrated an advanced level of competencies. The summary of the initial assessment is shown in Table 3.

It could be noted that master's students with different bachelor degrees had different competencies and their level of competency was identified as being threshold and basic.

**Table 1. The initial assessment of master degree' students after admission**

Previous education					
Bachelor's degree in pedagogy		Bachelor's degree in non-pedagogy disciplines		Specialist degree and teaching experience	
79 students – 100%		41 students – 100%		12 students – 100%	
Level of pedagogical competencies demonstrated					
Threshold	29.2%	Threshold	34.1%	Threshold	0%
Basic	56.9%	Basic	63.4%	Basic	41.7%
Advanced	13.9%	Advanced	2.5%	Advanced	58.3%

The students' reports and the quality of the classes they conducted were assessed to design a system of the criteria and parameters for assessing competencies. The students' work was evaluated on a scale from 0 to 2 (0– the student failed to demonstrate competency, 1– the student did quite well, 2– the student did very well). When the evaluation was completed, the students received a certain number of points. Teachers could determine the competency level of their students effectively (threshold level, basic level, and advanced level) using this three-level scale. The parameters used to evaluate the students' work are shown in Tables 2 and 3.

Depending on the final grades from the Tables 2 and 3 (with a maximum of 66 points) the student's competencies can be evaluated as below the threshold (33-44 points), basic (45-55 points), or advanced (56-66 points).

**Table 2. Evaluation of the project summary (24 points)**

Parameters	Points		
	0	1	2
<b>A general description of the educational organization</b>			
Comprehensiveness			
Quality and an amount of obtained data			
References to literature sources			
The data analysis and conclusions			
The level of pedagogical and methodological knowledge during the analysis			
<b>A description of the educational environment in the class</b>			
The student applies psychological and pedagogical techniques and validates their use			
The student gives references to the assessment methods			
The description of facts, cases and phenomena			
The class dynamics are outlined in the report			
The report shows features of the class and whether they correlate with the age of the pupils			
The student uses widely accepted psychological and pedagogical terminology			
The student analyses the unique features of the class and makes the required conclusions and suggestions			
FINAL GRADE			

**Table 3. Evaluation of the class sessions/extracurricular activities (42 points)**

<b>A technological chart of a class session/extracurricular activity</b>			
<b>Parameters</b>	<b>Points</b>		
	<b>0</b>	<b>1</b>	<b>2</b>
<b>A technological chart of a class session/extracurricular activity</b>			
The student formulates correctly the triad of goals and defines results for every educational aspect			
The content of a class session/activity correlates with the established goals			
The student defines practices that should be employed in compliance with the professional standard of the teacher			
The content of a class session/activity is in agreement with the age, interests, and abilities of pupils			
The class session/activity is well structured and efficient			
The student uses appropriate literature and Internet resources			
<b>Delivery of a class session/extracurricular activity</b>			
The student states and briefly explains the topic of a class session/activity			
The student states the goals and objectives in a clear manner so that they can be easily understood by children			
The student establishes a technique for obtaining feedback in accordance with the activity approach, the individual approach, and the personal approach			
The student helps pupils to achieve essential results			
The student has sufficient knowledge of the given discipline			
The student effectively communicates with pupils during the class session/activity			
Speech culture, facial expression, body language and emotionality of a student are appropriate; a student presents information in a clear manner			
The student recognizes the importance of a classroom' image and prepares necessary visual aids			
The student involves children in the learning process			
<b>Self-assessment</b>			
The ability to analyze, draw conclusions, and make suggestions			
Activities lead to the achievement of the disciplinary and educational goals of the class			
Self-assessment includes the analysis of the conducted class session/activity in regard to the achievement of the stated goals and the extent the outlined objectives are accomplished			
The student recognizes unique features and individual needs of children and conducts the class session/activity in accordance with these factors			
The student can evaluate the conducted class session/activity and its results, identify pedagogical difficulties and determine potential areas for self-improvement			
Areas of the student's professional growth are identified			
FINAL GRADE			

## **DISCUSSION**

The analysis of the federal educational standard 44.03.01 “Pedagogical education” (bachelor’s degree) allowed us to identify the most important entry-level competencies to be assessed:

General professional competency 5. Adherence to principles of professional ethics and speech culture

- Competency 1. The ability to implement educational programs in accordance with the educational standards,
- Competency 2. The ability to use modern techniques and methods of teaching and evaluation,
- Competency 3. The ability to educate and establish high moral principles of pupils during classes and extracurricular activities,
- Competency 4. The ability to use the educational environment to achieve personal, interdisciplinary, and disciplinary goals of the education and the ability to maintain the quality of the educational process,
- Competency 5. The ability to promote social integration and professional self-identification of pupils,
- Competency 6. The ability to interact with the participants of the educational process.
- Competency 7. The ability to create the environment in which students are encouraged to be cooperative, be initiative, be active, be creative, and self-sufficient,
- Competency 8. The ability to design educational programs.

The professional competencies that had to be developed during the first internship were identified in accordance with the Federal Educational Standard 44.04.01 “Pedagogical education” (master’s degree):

- Competency 1. The ability to use modern methods and technologies to organize and evaluate the educational process during the implementation of various programs,
- Competency 4. The ability to develop, implement, and assess the efficiency of educational methods, techniques and approaches,
- Competency 7. The ability to develop an educational environment,
- Competency 9. The ability to develop new methods of monitoring the education quality; the ability to develop various assessing tools and the ability to use technologies for this task,
- Competency 10. The ability to develop courses, educational technologies, and specific teaching methods,
- Competency 13. The ability to monitor the current state and promising areas of the educational system (together with its macro- and microenvironment) through the use of various methods of strategic and immediate analysis.

An analysis of various situations in practice allowed us to determine the aspects and the content of the first pedagogical internship. During their internship student teachers designed and conducted classes and extracurricular activities. The internship was undertaken simultaneously with theoretical study. While students were studying theoretical questions, they also prepared for the practical (specifically, they studied the research and design components). They took into consideration an educational organization, possible methodological methods, and children's abilities, to arrange classes and extracurricular activities. They submitted a project summary with:

- A general description of an educational organization.
- A description of the educational environment for the class.

- Pedagogical conclusions and suggestions for further work with the children and appropriate methods to implement those suggestions.

After the analysis of the data, students designed and conducted class sessions and extracurricular activities, created technological charts and planned self-assessment.

At the teaching stage, it was important to eliminate the existing differences in students' pedagogical knowledge. This was achieved while the students were studying theoretical questions (for example, on scientific research and research design) and preparing for assignments. Teachers who were assigned to supervise teaching internship consulted with the students and explained how they could fill their professional gaps. Furthermore, lecturers together with supervising teachers from the educational institutions helped students to acquire those crucial competencies needed for their first teaching internship.

At the control stage of the research, it was important to assess the students' competency level. To achieve this goal, the project summaries and the classes/extracurricular activities conducted by the students were evaluated. Analysis of the final reports on the first teaching internship revealed "weak spots" to be addressed during the student teachers' internship

## **CONCLUSION**

The evaluation of competencies allowed us to identify the threshold and the below-threshold values of parameters and to identify potential areas for further development ("weak spots").

The competency assessment showed that students experienced difficulty in formulating children-oriented aims for class sessions and activities. This revealed their inability to evaluate educational results. The analysis of methodological tools also caused difficulties. During the stage of developing class/extracurricular activity, students struggled to identify the tasks that teachers and pupils should complete using the educational

method that was employed. Master's students also found it challenging to choose techniques and approaches needed to achieve educational goals. We concluded that significant attention in master's programs should be paid to the formulation of pedagogical conclusions and suggestions.

The research revealed "weak spots" of the competency assessment process, and a new insight on introducing competency development to the process of educational program design.

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*Chapter 11*

**MASTER'S PORTFOLIO IN EDUCATION:  
A FRESH VIEW ON THE PROCESS  
OF DESIGNING AND IMPLEMENTATION**

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**ABSTRACT**

There are relatively few methods for developing and evaluating students' competencies in the field of education. Portfolios may be a different mechanism to solve these problems, but the traditional format of a portfolio as a collection of fragmented materials cannot address this concern. A fresh view on the portfolio is needed in the context of the internationalization of education. The portfolio should document the process and the results of various activities in order to create an account of the individual's strategy of both their personal and professional development. The aim of this study is an implementation of the author's

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theory and testing a Master's portfolio in Education. The portfolio includes practice-oriented sections and modules that reflect the process and results of student's participation in various types of educational and professional activities. These activities are based on individual development strategies. The study involved a literature analysis, modelling, questioning, an analysis of students' performance results (the portfolio and the reflective essay), interviews, and expert evaluation. This chapter presents the structure of the Master's portfolio in Education and specifies essential, purposeful, content, procedural and criterion characteristics. It is hoped that it will inform theorists and practitioners involved in teacher training as well as for Master's student teachers.

**Keywords:** Master's degree in education, portfolio, module

## INTRODUCTION

The requirements placed on modern teachers have highlighted the problems of quality in teacher training, the assessment of students' readiness for teaching and the application of educational results to current and future trends in educational practice. New technologies are required to implement new educational strategies for the transformation of education. These technologies must reflect the updated content, process and results of students' participation in practice-oriented, professional-oriented and reflective activities. One of these is the portfolio technology to support the new educational strategy.

In determining the need and the possibility of using portfolios in the pedagogical education system we find contradictions between:

- the values of the humanistic paradigm of teacher training and the formal approach to the process of individualization in education, the satisfaction of student's individual educational and professional interests and needs;
- the competence paradigm of education which makes new demands on the system and the quality of teacher training, and the traditional approach to quality evaluation of students' training

which does not provide a comprehensive assessment of their level of readiness for teaching.

## **PURPOSE AND OBJECTIVES OF THE STUDY**

The research set out to answer the following questions: 1) how to design a student's portfolio in a Master's degree in Education and how to implement it in order to promote the development of the set of competencies to meet the current and prospective needs of modern educational practice, and to reflect the process and result of student's participation in various types of educational and professional activities as part of their individual development strategy? and 2) what are essential, target, procedural and criterion characteristics of the Master's portfolio in Education?

It was based on an analysis of scientific literature and educational practices on research issues, student questionnaires, an analysis of students' performance (through portfolios and reflective essay), interviews with graduates and expert evaluation. The study involved 102 students.

The purpose was to design and test the Master's portfolio in Education, including those sections and modules that are substantively and procedurally oriented to modern school teachers' activities and reflect the process and result of the student's participation in various types of educational and professional activities. The portfolio would be based on individual strategies for personal and professional development. The research would also specify the essential, target, process and criterion characteristics portfolio. It involved:

- The identification and specification of the essence, purpose and objectives of the Master's portfolio in Education;
- The design of the author's structure of the Master's portfolio in Education;
- An outline of the conditions for implementing the Master's portfolio in Education in the university;

- The development of criteria for the portfolio assessment and criteria for its maintenance;
- Testing the Master's portfolio in Education in vocational training at a classical university.

## **LITERATURE REVIEW**

Russian research into the problems of designing and using a portfolio has examined:

- foreign experience of using portfolios in the educational process, presented in works by Zagvozdkin (2004), and Novikova, Pinskaya, Prutchenkova & Fedotova (2004);
- practical aspects of creating and using a portfolio in the context of general and secondary education, in particular in the process of implementing pre-profile student training, have been explored by Molchanova, Timchenko & Tokareva (2010), and Novikova, Pinskaya, Prutchenkova & Fedotova (2008);
- a portfolio as one of the modern techniques used to assess students' educational results studied by Chernyavskaya & Grechina (2008), and Zvonnikov & Chelyshkova (2007);
- portfolio implementation in the process of teacher training, reported by Kolodkina (2008), Nikiforov (2007), and Tazutdinova (2010);
- the problem of competencies assessment of students of a pedagogical university using a portfolio was explored by Nikiforov (2007), Semenov (2008), and Shalashova (2008);
- portfolio design and implementation in educational and psychological training was explored by Asafova & Golovanova (2015), and Sakhieva (2013);

- The creation of teachers' portfolios as a professional activity was discussed by Makarova (2010), Pinskaya (2009), Pronina (2009), and Romanenko (2005).

A number of foreign researchers have focused their work on the problems of using portfolios in the educational process and teaching activities, including Bataineh, Al-Karasneh, Al-Barakat, & Bataineh (2007), Mansvelder-Longaryoux, Beijaard, & Verloop (2007), Strivens (2007), Kimball (2002), Baume (2001) and Hurst et al. (1998).

The scientific literature presents various definitions of the portfolio concept. Dergacheva (2009) defines a portfolio as a type of assessment for practical activities to evaluate individual skills development in the context of day-to-day or professional situations which are close to real life requirements. Grigorenko (2007) interprets the concept as an effective, rational and transparent way to promote current and future experts in the labor market, a way to evaluate their key and other competencies, as well as promoting a professional and creative interaction between an employer and these experts.

We believe that if the portfolio content is regarded only as a way to assess individual competencies and their promotion in the labor market it will narrow the essence of this concept in its contribution to the transformation of education. The portfolio idea is associated with a new understanding of modern educational goals including providing the individual with the ability to determine their strategy, to design and implement an individual course of personal and professional development in conditions which are continually changing throughout life (Kalimullin, Vlasova & Sakhieva, 2016). In this context, the emphasis is not on the portfolio as a final product but on the creative process of the portfolio' design and implementation, and on those skills, competencies and practical experience that a student obtains in the process of working on a portfolio. As a result, we have defined the Master' portfolio in Education as a method aimed at designing and implementing an individual trajectory for personal development based on reflection that indicates the process of

his/her participation in various types of educational and professional activities and demonstrates the level of competencies' development.

The following types of portfolios are described in publications by Russian researchers:

- in foreign practice: a working/documentation portfolio (presenting works completed during the entire training period); a process portfolio (including all documents on the aspects of learning and student's reflection on the learning process with the help of records, reviews, etc.); a showcase portfolio (which includes only the best completed work, used to summarize the outcomes of student's various activities); an evaluation portfolio (the learner participates in the selection of portfolio content, substantiates the selection criteria and portfolio assessment, and reflects on the materials presented), and other types of portfolios (Novikova et al. 2004);
- in Russian practice: a portfolio of documents (a portfolio of certified (documented) individual educational achievements); a portfolio of works (a collection of the student's various creative and design works, as well as the description of main forms and directions of his/her educational and creative activity); a portfolio of reviews (which includes characteristics of student's attitude to various activities as well as a written analysis of student's activities and outcomes) (Grigorenko, 2007).

Grigorenko (2007) specifies the advantages and disadvantages of a portfolio of documents, a portfolio of works and a portfolio of reviews. For example, characterizing the documents portfolio, she emphasizes that it gives an idea of results, although it does not describe the process of students' development, their interests, an individual style of educational activity and creative activity; a portfolio of works illustrates the quality of the works submitted, the progress of students' educational and creative activities and the focus on their interests. But it cannot contribute to the students' educational ranking. A portfolio of reviews includes the student's

self-assessment mechanisms, but it is difficult to formalize and account for the collected information (Grigorenko 2007).

Despite the increasing number of publications devoted to the issue of creating and using a portfolio in educational and professional practice the problem of designing and using a portfolio in the educational practice of teacher training in the Master's degree in Education at a classical university is still insufficiently studied both in terms of theoretical and of practical knowledge. There is a need for further study of this phenomenon.

## **RESULTS**

### **The Purpose, Objectives and Structure of the Master's Portfolio in Education**

The purpose of the Master's portfolio in Education is to promote the design and implementation of the student's personal development trajectory, to ensure tracking of his/her individual progress in a wide range of educational and professional contexts, and to demonstrate their level of competencies and readiness for teaching.

The portfolio tasks are to:

- maintain and stimulate the student's motivation for teaching activities;
- develop the skills of goal setting and planning of educational and professional activities;
- demonstrate the student's progress in educational and research and other achievements, to ensure tracking of his/her individual progress in a wide range of educational and professional contexts;
- design and implement an individual trajectory of student's personal development and establishment in the profession;

- present an objective integrated assessment of the level of student's competencies formation and his/her readiness for teaching activities;
- develop skills of reflection;
- form the prerequisites for further successful self-actualization and self-realization within the professional and pedagogical community.

There is currently no strictly defined structure for a higher school student's portfolio in Russian educational practice. It varies due to the type of portfolio, objectives, training direction and profile, the features of the educational process and other indicators.

The research set out the structure of the student's portfolio, comprising the following sections and modules.

The title page with:

- The full name of the educational organization (university);
- The full name of the structural unit (if available);
- The name of the graduating department;
- The training aim;
- The training profile;
- The surname, name and patronymic of the portfolio subject;
- The subject's status (student / graduate);
- The form of study, year, number of an academic group;
- The surname, name and patronymic of a scientific consultant (if available);
- The city and year.

### ***Introduction***

In the introduction, the student focuses on the relevance of the portfolio design and its use in modern educational practice; formulates the goals and objectives for developing the portfolio; briefly sets out its structural components and content (explains exactly which practice-



oriented materials are included in the portfolio, and justifies the inclusion of these materials as the evidence of developing specific teaching competencies); and describes the role of their portfolio in the process of designing and implementing their individual trajectory of personal and professional development. This is typically 1½-2 pages.

## **Section 1. General Information about the Student**

- 1.1. Summary (1 page)
- 1.2. Documents on education, professional development and professional retraining (scans)
- 1.3. Autobiography (1 page)

## **Section 2. Diagnosis and a Roadmap of Personal and Professional Development**

- 2.1.A motivation letter which presents and justifies the student's personal point of view (their position and attitude). This sets out the problems, characterizes the role and mission of the teacher in modern society and the role of the teacher in their students' personal development, and discusses the relationship between the material presented and his/her personal experience. Examples of suggested topics include: My future profession as a teacher; A 21st century teacher; The 21st century School; Transforming the teacher's mission in modern society; The role and mission of a teacher in modern school; What kind of teacher is needed in a 21st century school?; The teacher in a multicultural educational space; A teacher's professional activities in the context of the "lifelong learning" education paradigm, The teaching profession: The succession of generations. This letter typically runs to 1½-2 pages.

- 2.2. The pedagogical credo in which the student creatively reveals the key ideas and mission of his/her pedagogical activity in the context of modern educational practice.
- 2.3. A diagnosis of personal and professional development (the initial stage of the Master's training program). In this section, the student carries out a self-diagnosis and self-analysis of the level of their development in respect of key qualities and competencies. This diagnosis uses various diagnostic techniques including motivational readiness for pedagogical activity, a psychological portrait, creative potential, readiness for research activities, trends in styles of pedagogical communication, psychological and pedagogical competence, methodological competence, readiness for self-educational activity, readiness for innovation, etc.
- 2.4. The roadmap of personal and professional development

Using self-diagnostics and self-analysis described in section 2.3, the student determines their goals, objectives, directions, activities, implementation dates, performance targets, the problems of, and barriers to, personal and professional development; and the possible ways to overcome or minimize them.

### **Section 3. The Normative and Educational-Methodological Basis of Pedagogical Activity**

This section includes the documents which regulate various aspects of teacher's pedagogical activities in a modern school, as well as the teaching materials necessary for the implementation of pedagogical activities.

### **Section 4. Educational and Professional Activities**

The process and result of student's mastery of the basic master's professional educational program "Pedagogical education in a modular format" are described. The names of modules and their content in this section depend on the curriculum which is followed.

In the process of designing and implementing the portfolio, the module is considered as an integrated complex of study sections, various types of

practice, and student's research work. This has a logical conclusion and is developed as part of the main professional educational program.

For each curriculum module, the student reflects on various types of practice and the mastery of the basic professional educational program. These practices can include a bank of self-modelled and solved case studies; solutions to various professional problems; technological maps, notes or video clips of various classes; and scientific and methodological materials (including materials for students with special educational needs), projects on students' individual educational routes, projects on various programs, a set of subject-oriented tests and assessment materials, research, design work, innovative developments, etc. The student has to select the best and most significant work and substantiate the choice for each module.

The students' work within this framework is evaluated by a teacher against the developed criteria. The material presented in this section includes both the student's process and results and the university teachers' and school supervisors' assessment of their individual style of activity, their level and nature of interactivity in lessons, their level of creativity, and their focus on the specific result in accordance with the Federal State Educational Standard and teacher's professional standards, etc.).

- 4.1. Adaptive module (for students without basic pedagogical education)
  - 4.2. Module 1 "Research in education"
  - 4.3. Module 2 "Fundamentals of design and management in education"
  - 4.4. Module 3 "Information and communication technologies in professional activities"
  - 4.5. Module 4 "Designing and implementation of the educational process"
  - 4.6. Module 5. "Individualization in education"
  - 4.7. Module 6 "Subject profile and methodological deepening"
  - 4.8. Module 7 "Monitoring of students' educational results"
- There are also optional modules 4.9, 4.10, and 4.11.

**Section 5. Research and Publication Activity**

- 5.1. Full- and part-time participation in scientific and practical events (a table with: item number, the date of the event, the name of the event with the level indicated, location, result).
- 5.2. Research results of the course work
- 5.3. Research results within the framework of graduate qualification work
- 5.4. Results of participation in grant activities/innovation projects
- 5.5. List of publications.

**Section 6. Extra-Curricular Activities**

This section lists the student's participation in various types of extracurricular activities (as a group monitor; participation in student self-government, social projects, various competitions/festivals, sports/recreational activities, vocational guidance; participation in the activities of social movements/organizations/foundations, etc.).

**Section 7. Final Results of Educational and Professional Activities and Achievements**

- 7.1. Final results of educational and professional activities (a copy/scan of the record book/student's rating; results of final tests, test results including external, professional competitions, state final certification with the participation of employers, etc.)
- 7.2. Student's achievements (table with: item number, the name of the event with the level, date, organizers, location, results)
- 7.3. The learners' achievements (achievements of learners under the student's guidance during various practices and/or teaching activities) (if available).

## **Section 8. Reflection and Third-Party Evaluation**

- 8.1. A diagnosis of personal and professional development at the final stage of Master's training in Education. In this section, the graduate applies various diagnostic techniques (motivational readiness for pedagogical activity, creative potential, readiness for research activities, trends in pedagogical communication, psychological and pedagogical competence, methodological competence, readiness for self-education activities, readiness for innovative activities, etc.) to perform self-diagnosis and self-analysis of their development level of professional qualities and competencies development; and compares the results at their initial and the final stage of the Master's training in Education.
- 8.2. Third-party evaluations (copies/scans: reviews and comments on various types of work; descriptions and reviews of practical work; results of introducing pedagogical research into educational practice; letters of recommendation (for example, for admission to graduate school); an expert evaluation of the portfolio by an employer; employer's comments on the level of the graduate's training, their competencies, readiness for professional pedagogical activity, etc.).
- 8.3. The final reflective essay, with student's self-analysis of the competencies developed through the process of working on the portfolio, as well as a self-analysis of the outcomes of the Master's program in Education; a description of the experience acquired through creative, research, design and other activities; a description and analysis of the difficulties encountered in working on the portfolio, and a description of the ways these were overcome or minimized; the role of the portfolio and the role of the Master's program in Education in the process of developing personal professional attributes.
- 8.4. The roadmap of personal and professional development

The student determines their goals, aims and objectives, planned activities with dates for their implementation, plans for presenting the results of further personal and professional development on the basis of self-diagnosis and self-analysis of the development of their professional qualities and competencies.

#### 8.5. Employer cover letter

- Applications (certificates, certificates of merit, letters of gratitude, etc.).
- Conditions for implementing and evaluating the portfolio in a university

The research set out the conditions for implementing the student portfolio:

- motivating university teaching staff and students to design and use the portfolio;
- developing the competencies of university teaching staff and students in this field;
- continuity and succession of portfolio usage;
- systematic work on the portfolio;
- regular access to the portfolio while evaluating students' educational research and other achievements and determining the level of their competencies;
- using the portfolio for an integrated assessment of the students' readiness for professional activities;
- development of the scientific-methodological and criterion basis for the target characteristics of specific types of portfolio;
- organizational and advisory support for the design and use of a portfolio.

**Portfolio Evaluation Criteria:**

- compliance of the portfolio content with its type, structure and target characteristics;
- presentation of materials developed by the student and in collaboration with other students, with an indication of the individual's personal contribution;
- accuracy and objectivity of the materials presented;
- representation of materials in various content and forms;
- integrity and thematic completeness of the materials;
- concise written explanations;
- presentation and validity of materials reflecting the development of the student's universal, professional and occupational competencies;
- presentation and validity of materials from the student's reflection on their competence development;
- presentation and validity of materials reflecting the student's development in self-educational competence and their ability to identify ways of further self-development and self-realization;
- a creative approach to the portfolio design;
- an accurate and aesthetic portfolio design.

**Assessment Criteria for portfolio maintenance:**

- a clear rationale for the portfolio design and implementation;
- establishing unique features in the personal and professional development;
- validity of, and reasoning behind, the materials presented;
- highlighting the main outcomes of the student's activities reflecting the level of competencies development and readiness for professional teaching;
- the ability to reflect on their own activities and their results;
- presentation of a strategy for further self-development;

- fluent usage of psychological, pedagogical, methodical and special terms;
- a profound knowledge of the portfolio materials;
- clear, logical, competent and fluent presentation of the material;
- compliance with the rules for maintenance;
- convincing and reasonable answers to questions.

### **Results of Testing the Portfolio**

The results of a survey of students ( $n = 102$ ) showed that the majority (89.4%) were familiar with the “portfolio” concept and understood the purpose of its design and use. However, only 62.6% of students had experience in creating a portfolio, and for most it was the mechanical compilation of fragmented materials.

The overwhelming majority of students defined a portfolio as a folder of works collected to present themselves or results of their own activities, i.e., these were portfolios of documents or portfolios of works. These were mainly created for student’s activities assessment or various competitive procedures, entrance examinations, etc.

A majority of respondents (79.6%) positively accepted the idea of designing a portfolio. They confirmed that it would contribute to the formation of competencies necessary for the pedagogical activity (for example, reflective competence) and increase their chances of finding a job and climbing up their career ladder. Other students (20.4%) identified the major barriers preventing them from the participation in this process as complexity, lack of time and reluctance.

At the beginning of the study, the overwhelming majority of students did not display the competencies needed for designing a portfolio. Particularly lacking were the competencies to reflect the process and outcomes of students’ participation in various activities, and the level of their competence, including the competence to reflect on their individual personal development strategy.



In the final stage of the research, graduate students presented their portfolio at the state examination. The portfolios were assessed by employers and experts, and the students' reflective essays and interviews were analyzed. The results of this analysis showed that 97.06% of students had developed the ability to design an individual trajectory of personal and professional development by using a portfolio. Furthermore, this ability allowed them to demonstrate the level of their competence in various activities, to trace the progress of their personal and professional development, and to reflect on their performance.

## **DISCUSSION**

The elaborated portfolio is integrated. It includes various types of portfolio and allows the student to design and implement an individual trajectory for their professional development, to demonstrate the level of his/her competencies development and consciously to start a professional and pedagogical career and establish prerequisites for further self-realization.

The process of portfolio design and subsequent implementation affects the functions of teachers. For instance, their role changes from informing to counselling and coordinating. This is especially important in the context of the new lifelong learning paradigm where changes are taking place in the relationship between teachers and students towards humanization, democratization, open dialogue and a greater confidence in potential abilities of each student. This contributes to a fundamentally new level of interaction between the participants of the educational process, the effective formation of competencies and the conscious entry of students into the professional and pedagogical community.

The results of this research led to a set of practical recommendations for creating a portfolio for a master's student teacher:

- the main sections of the portfolio should focus on a certain type of activity;

- the portfolio should only include reliable information;
- the portfolio should contain materials developed by the student and those resulting from collaboration with other students. The personal contributions should be specified and brief information about the co-authors should be given;
- the portfolio should include materials on various educational content and presentation;
- each element of the portfolio should be dated so the students' progress in personal and professional development can be traced;
- the portfolio should include appropriate photographs and illustrations.

## CONCLUSION

As a result of the research:

- the main contradictions determining the need and potential for using the portfolio in teacher education have been outlined;
- the purpose and objectives of creating a portfolio of a master's student teacher have been identified and specified;
- the author's structure of the Master's portfolio in Education has been designed with the following sections: 1) general information about the master's student; 2) diagnostics and the roadmap of personal and professional development; 3) the normative and educational-methodical basis for pedagogical activity; 4) educational and professional activities (the process and the outcomes of mastering the modules of a basic professional educational program); 5) research and publication activities; 6) extracurricular activities; 7) the final results of educational and professional activities and achievements; 8) reflection and third-party assessment;
- the conditions for implementing a student's portfolio at the university have been specified;

- the assessment criteria for the design and maintenance of the portfolio have been developed;
- the Master's portfolio in Education was tested through a course of students' professional training at a classical university. This showed that the majority of students were able to design and present a portfolio. Once established, this ability demonstrated the level of students' readiness for professional pedagogical activity, an individual trajectory for their professional development and their ability to reflect on the results of educational and professional activities;
- practical recommendations were made for creating the Master's portfolio in Education.

Master's portfolio in Education is:

1. The method used for designing and implementing an individual strategy of student's personal and professional development;
2. An individually collected set of materials and documents which demonstrate the student's educational, research and other achievements;
3. A comprehensive integrated assessment of the level of competencies development and the students' readiness for teaching;
4. A means of competitive entry into the labor market and into the professional and pedagogical environment;
5. An effective way for the student to interact professionally with an employer from the very beginning of his/her study at university.

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*Chapter 12*

## **PSYCHOLOGICAL WELL-BEING OF NOVICE TEACHERS**

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### **ABSTRACT**

The article concerns the problem of the psychological well-being of novice (newly qualified) teachers going through their induction (the process of professional adaptation). The objective of the research was to study the quality of a teacher's life, including indicators of the teachers' psychological well-being. Teachers going through professional adaptation are usually characterized by high professional ambitions and their ability to accomplish them, a proactive stance and optimistic approach to professional difficulties, and satisfaction with their professional achievements. The teachers in the study shared their views on a good quality of life in aspects including "level of independence," "social relations," "spiritual domain" and satisfaction with their professional activities, mental resistance to professional problems, and a positive attitude to work. The study established that high efficiency, autonomy and independence in decision-making, acceptance of loss of energy and the ability to separate personal life from professional life are all important conditions for teachers' psychological well-being.

**Keywords:** novice teachers, psychological well-being, quality of activities, quality of life

## **1. INTRODUCTION**

### **1.1. Identifying the Problem**

There is an obvious need for psychological support for novice teachers going through the first stage of their professional development. It follows that it is important to study the various aspects of their psychological well-being through the lens of their quality of life (LQ). The integration of a young specialist in the process of professional development in the modern socio-cultural educational environment depends largely on the level of their satisfaction with various aspects of life, including both professional and personal dimensions (Povarenkov, 2018). Research shows (Sivrikova, Chernikova, & Sokolova, 2017) how quality of life and professional satisfaction impact the process of teachers' adaptation. Previous studies also analyzed the relationship between procrastination and teachers' life quality perceptions (Khusainova, 2018). This study examined the dependence of teachers' socio-psychological adaptation on their life satisfaction and the educational process as a whole. It established that there is an inverse relation between levels of procrastination and the teacher's perception of their professional effectiveness.

### **1.2. Literature Review**

Psychological well-being often reflects an individual's life experiences (Andronnikova & Veterok, 2016) and translates into a subjective satisfaction with aspects of life such as active social engagement, physical security and a sense of security, healthy self-esteem and positive emotions.

These are key for the effective management of tasks by a young specialist adaptating to their profession. The fundamental concept, associated with the term “psychological well-being,” is “life quality” (quality of life) (Andronnikova & Veterok, 2016). In keeping with the definition from the World Health Organization (WHO), we argue that quality of life should be viewed as “the individuals” perception of their position in life in the context of culture and value systems in which they live, and in accordance with their own goals, expectations, standards and concerns (PsyLab, 2013). This assessment of life quality is an integral indicator that includes subjective indicators of the physical and psychological state, the level of independence, relationships with other people and personal convictions. Thus we can predict the psychological support needed to adapt these individuals to pedagogical activity. A number of researchers (Levina & Pestereva, 2013) indicate that teachers assess their general health and vitality as being rather low and note that the level of teachers’ mental health is below the norm. This is manifested by depressive and anxious experiences, psycho-emotional distress, irritability, and an unstable mood. The data indicated a low life quality of the teachers surveyed, as indicated by their health. Here we agree with the position of Nikiforov (2006) who notes that in order to carry out professional activities properly, a specialist must possess both the necessary professionally qualities and be satisfied with various aspects of their life activity.

The different types of professional activity Povarenkov (2017) can be divided into professional and meta-professional, forming a system of qualities that are important for the activity. They affect the functional efficiency, acquisition, self-regulation and implementation of activities. Returning to the terminology of Povarenkov (2017), we describe the concept of “activity-important qualities of a professional,” as the “individual qualities of a process owner which affect the efficiency of implementation, mastery and self-regulation of various types and forms of professional activity” (Povarenkov, 2017: 193). These teacher’s qualities were analyzed using the AVEM and WHOQOL-100 techniques.

## **2. METHODOLOGY**

### **2.1. Methods**

The objective of the research was to study the teachers' quality of life, including activity-important qualities as an indicator of their psychological well-being. Two psycho-diagnostic methods were used to achieve this goal, the WHOQOL 100 questionnaire and AVEM questionnaire.

The WHOQOL 100 questionnaire subjectively measures the respondents' individual perception of their life in health-related areas, but it does not measure their health state objectively. The questionnaire emphasizes the subjective assessment of respondents' health and living conditions more than their objective functional state. The WHOQOL-100 questionnaire allows us to describe the respondent's life quality profile, to determine its overall quality, as well as private assessments in six main area and 24 sub-areas of life. The core module of the questionnaire comprises:

#### G. Overall quality of life and health

##### i. Physical domain

- F1. Physical pain and discomfort
- F2. Vital activity, energy and fatigue
- F3. Sleep and rest

##### ii. Psychological domain

- F4. Positive emotions
- F5. Thinking, learning ability, memory and concentration (cognitive functions)
- F6. Self-esteem
- F7. Body image and appearance
- F8. Negative emotions

##### iii. Level of independence

- F9. Mobility
- F10. Ability to carry out daily activities

- F11. Dependence on drugs and treatment
- F12. Ability to work
- iv. Social relations
  - F13. Personal relationships
  - F14. Practical social support
  - F15. Sexual activity
- v. Environment
  - F16. Physical safety and security
  - F17. Home environment
  - F18. Financial resources
  - F19. Medical and social assistance (availability and quality)
  - F20. Opportunities for acquiring new information and skills
  - F21. Recreational facilities and their use
  - F22. Environment (pollution/noise/climate/attractiveness)
  - F23. Transport
- vi. Spiritual domain
  - F24. Spirituality/religion/personal beliefs

The AVEM questionnaire (Schaarschmidt & Fischer, 1997) is a multifactorial diagnostic tool to determine the types of behavior of people in a professionally demanding situation. It comprises 11 scales describing three areas of personality (professional activity, mental resistance to problems, emotional attitude to work) and reflecting the respondent's reactions to the requirements of the professional environment, as well as behaviors based on these reactions.

## **2.2. Experimental Procedure**

The test results were analyzed using the IBM SPSS Statistics package. The equality of the mean values was checked using Student's t-test.

The study involved young teachers from 14 schools in 7 municipal districts of the Republic of Tatarstan with a pedagogical experience ranging from 0 to 7 years. The 83 teachers were aged between 22 to 48

years, and there were 75 women and 8 men. The teachers were divided into two groups according to their pedagogical experience. Group 1 had between 0-3 years pedagogical experience and an average age of 27.5 years, while group 2 had between 4-7 years pedagogical experience and an average age of 36 years.

### 3. RESULTS

The analysis of average values of behavior type in professionally demanding situation (AVEM) for both groups of teachers indicated high professional demands, a high willingness to commit to solving professional tasks and a high concentration on the quality of fulfilling professional tasks. Values of more than 21 points are considered high (Figure 1).

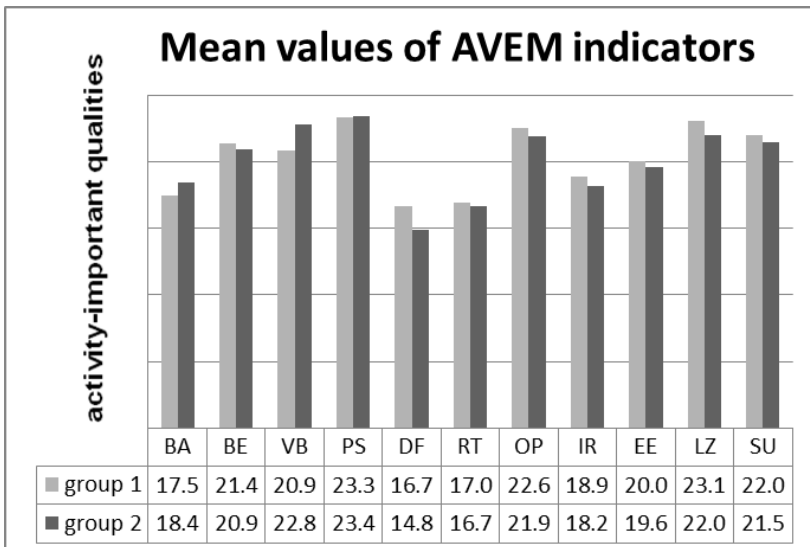


Figure 1. Average values of indicators of teachers' behavior types in a situation of professional requirements. BA - Subjective value of activity; BE - Professional claims; VB - Readiness to lose energy; PS - Striving for excellence; DF - Ability to maintain a distance in relation to work; RT - The tendency to abandon failure; OP - Active problem solving strategy; IR - Inner calm and balance; EE - Sense of success in professional activities; LZ - Life satisfaction; SU - Sense of social support.

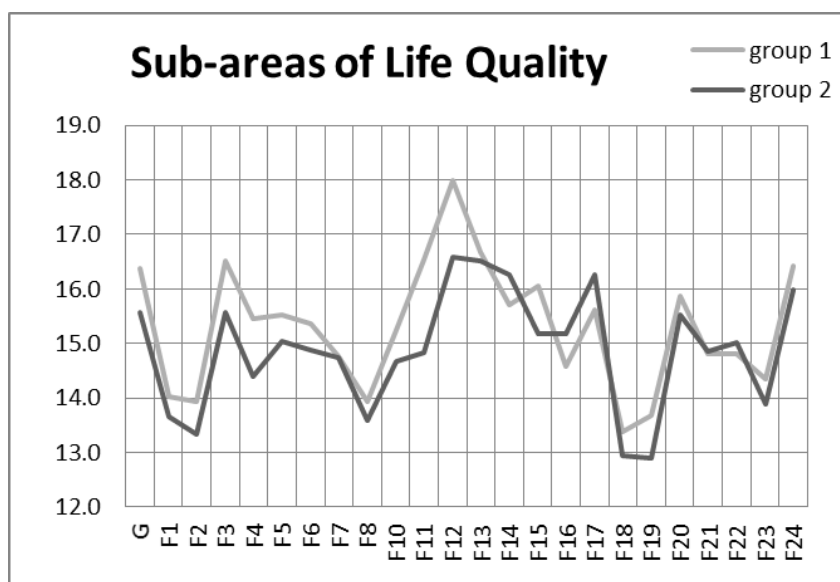


Figure 2. Average scores for LQ sub-areas. G - Integrated indicator of quality of life; F1 - Physical pain and discomfort; F2 - Vital activity, energy and fatigue; F3 - Sleep and rest; F4 - Positive emotions; F5 - Thinking, learning ability, memory and concentration (cognitive functions); F6 - Self-esteem; F7 - Body image and appearance; F8 - Negative emotions; F10 - Ability to carry out daily activities; F11 - Dependence on drugs and treatment; F12 - Ability to work; F13 - Personal relationships; F14 - Practical social support; F15 - Sexual activity; F16 - Physical safety and security; F17 - Home environment; F18 - Financial resources; F19 - Medical and social assistance (availability and quality); F20 - Opportunities for acquiring new information and skills; F21 - Recreational facilities and their use; F22 - Surrounding environment (pollution/noise/climate/attractiveness); F23 - Transport; F24 - Spirituality/religion/personal beliefs.

Teachers in both groups were characterized by their optimism in situations of professional difficulty. Teachers also noted satisfaction with their professional accomplishments and indicated significant social support from their surroundings. The results indicate the readiness of teachers of both groups to solve problems in their professional activity.

However, an analysis of the indicators showed some differences between the two groups of teachers. Teachers with 0-3 years' experience were characterized by high significance of the profession (BA), the desire to fulfill their professional duties with quality and on time (PS), and their optimistic attitude to emerging professional problems (OP). These teachers

were mentally resistant to professional problems and satisfied with life (LZ). The mean value of the indicator of their ability to maintain a distance (DF) is significant. This is their ability to share work and personal life and be able to relax after work. The teachers in group 2 were ready for significant loss of energy (VB), they strived to do their work perfectly (PS), and bring an active and positive attitude to solving professional problems. However, the low DF (maintaining a distance) indicator shows that work was increasingly filling their life and they could no longer distance themselves from it.

A comparison of the mean values using Student's t-test suggests that the two groups had a significant difference in terms of VB (readiness to lose energy) ( $t = -2.529$ ,  $p = 0.013$ ), and DF (maintain a distance) ( $t = 2.085$ ,  $p = 0.040$ ). These significant differences show that with increasing experience the teachers' personal life is increasingly filled with pedagogical activity.

The study of teachers' LQ (quality of life) is a relatively new area. An analysis of the mean values of the six areas and 24 sub-areas showed that all of them indicated "average" and "good" quality of life (Figure 2).

For both groups, the "environment" area had an "average" value for quality of life in sub-areas F18 (financial resources), F19 (medical and social assistance), and F23 (transport). These sub-areas describe the external conditions of the teacher's life. Respondents indicated low satisfaction with financial security, sense of security, medical and social assistance. The need for their own housing, the availability of high-quality medical care, and opportunities for recreation and entertainment all explain the lack of satisfaction with their material living conditions. The sub-area F8 (negative emotions) refers to dissatisfaction with the quality of life. This sub-area explores the strength of an individual's negative experiences and their influence on his/her day-to-day functioning. Teachers indicated their existing negative emotions which undoubtedly affect their psychological well-being. At the same time, the sub-area F4 (positive emotions) for both groups of teachers fell into the interpretation interval of "good LQ." However, for group 1, the indicator was towards the upper value while in group 2, it was at lower end of this scale. Sub-area F1



(physical pain and discomfort) and F2 (vital energy, activity) in the described groups lay in different interpretation intervals. In group 1, they were in the “good LQ” interval; in the second group they showed an “average LQ.” Consequently, with increasing work experience, teachers feel a decrease in their endurance, the appearance of fatigue and disturbing physical sensations. In general, the analysis of the LQ profile shows a decrease of all the indicators with the exception of sub-areas F16 (physical safety and security) and F17 (home environment), which increased slightly in comparison with group 1. It is possible that in group 2, the issues of home ownership have already been resolved, while those in group 1 - mostly young families - have to face this in the future.

The only statistically significant difference in teachers’ quality of life between the two groups as determined by the Student’s t-test was in the sub-area F12 (performance) ( $t = 2.636$  with  $p = 0.010$ ). This scale explores the individual’s use of their own energy for work. Teachers in group 2 are significantly less efficient than teachers in group 1. However, as noted above, these more experienced teachers are ready to devote all their strength to the fulfillment of professional tasks.

An analysis of the mean values of the six main areas indicates a good LQ for the level of independence, social interrelations, and the spiritual sphere, and confirms the previously recorded effect of a decreasing LQ with an increase in the pedagogical experience (Figure 3).

## **4. DISCUSSION**

The teachers in both groups noted their satisfaction with their professional achievements, strove for quality in fulfilling their professional duties, had high claims, had a positive attitude to the professional problems that arose, and pointed to social support from their surroundings. These results are consistent with those of Sivrikova, Chernikova, & Sokolova (2017), indicating that these teachers are sufficiently adapted to the professional activity. At the same time, these authors note that there are more cases of distancing from the profession among novice teachers. We

also found that teachers in their first three years of work at school were more capable of maintaining a distance to their work. The data shows that the ability to distinguish between work and personal life is reflected in high efficiency, a sufficient level of independence, and the energy to cope with issues both of professional activity and the problems of everyday life. We consider this personal quality to be a resource which helps to maintain life satisfaction and shows the quality of life of the young teacher. As their pedagogical experience increases, their life is filled more and more with work. While teachers were ready to devote all their strength to the carrying out professional tasks, the study showed that this energy was not enough to solve the tasks set for them. At the same time, teachers did not feel independent and free to make a professional choice.



Figure 3. Average scores for the main LQ areas.

Figure 3 shows differences in the areas of “physical,” “psychological,” and “level of independence.” For “level of independence” Student’s t-test shows statistically significant differences ( $t = 2.303$  with  $p = 0.023$ ). This indicates the ability to lead an autonomous existence, and the ability to cope independently with their daily activities and work.

Levina and Pestereva (2013) emphasize the interrelation between the indicators of mental well-being and of teachers’ social function. In describing the teachers’ quality of life, regardless of their pedagogical experience, the authors indicate a decrease in vital activity, role and social function, which they interpret as a reduction in the quality of life. In our study, we also point to the existing trend towards a decrease in quality of life, the first sign of which is a decrease in working capacity.

Earlier, we established that “the professional functioning of teachers is only possible if their needs for physical and psychological security, and financial stability are satisfied” (Khusainova, 2018). In this study, teachers pointed to a good quality of life in such areas as “level of independence,” “social relations,” and “spiritual domain” which manifests itself in high values of professional claims, an active strategy for solving professional problems, and a sense of success in professional activities, inner calm and balance.

## CONCLUSION

Young teachers identify a good quality of life in such area as “level of independence,” “social relations,” “spiritual domain.” They are satisfied with those aspects of life, which include important qualities such as professional activity, mental resilience to professional problems, and an emotionally positive attitude to work.

It was established that important conditions for the preservation of psychological well-being are high efficiency, autonomy and independence in decision-making, readiness for loss of energy and the ability to distinguish between personal life and professional activity.

Teachers on the threshold of professional adaptation are characterized by high professional aspirations and a focus on the quality of completing the professional tasks they are set, active optimism in the face of professional difficulties, satisfaction with their professional achievements and social support from their surroundings.

The teachers of the first group (low experience) are more able to provide a demarcation between the area of work and their personal (family) life. They are ready to lead an autonomous existence, to cope with their daily activities and work depending on nobody else. They determine the amount of their own energy for work better than teachers of the second (4-7 years of teaching experience). Group 1 teachers demonstrated psychological well-being, supported by meta-professional activities. Teachers in group 2 are characterized by optimal professional behavior. However, changes in their quality of life indicates the need for preventive work with these teachers.

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*Chapter 13*

**RISKS OF EARLY EMOTIONAL  
BURNOUT IN YOUNG TEACHERS:  
CAUSES AND PREVENTION**

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**ABSTRACT**

This study focused on the problem of early professional burnout of teachers. It seems that a syndrome of emotional and professional burnout affects not only experienced teachers but also young teachers, with less than five year's experience. The problem of emotional burnout is exacerbated as the demands on the teacher's personality and his/her professional activities increase, associated with the implementation of the new Federal State Educational Standards in schools and the introduction of the teacher's professional standard.

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This chapter aims to identify the causes and features of early emotional burnout in young elementary school teachers, and to develop preventive and corrective measures aimed at reducing the presence of burnout.

The study used diagnostics for emotional burnout developed by Boyko (1996), and the diagnosis of emotional burnout by Maslach & Jackson (1981), adapted by Vodopyanova & Starchenkova (2005).

The research, examining psychophysical, socio-psychological, behavioral symptoms of behavior, was conducted with 32 young teachers, and the results showed that professional burnout in schools occurred sooner than expected. Specifically, teachers with work experience ranging from 1 to 5 years may experience emotional burnout.

The study revealed that there are many factors contributing to the risks for young teachers including external and internal, personal, status-role, professional and organizational. The personal risk factors for burnout include a propensity for introversion; the individual's reaction as a characteristic of temperament which appears in the strength and speed of their emotional response; low or excessively high empathy; rigidity and authoritarianism towards others; and low self-esteem. The status-role risk factors include: role conflict; dissatisfaction with professional and personal growth; low social status; role behavioral stereotypes; and rejection by the reference group. These professional and organizational (corporate) risk factors lead to a high level of organizational stress. The study demonstrated that the emotional burnout of young teachers takes place in three stages: 1. The nervous tension phase, created by a chronic psycho-emotional atmosphere, destabilizing situation, and increased responsibility. 2. The resistance phase in which a person tries to protect himself from unpleasant impressions. 3. The exhaustion phase in which there is a weakening of mental resources, reducing emotional tone.

Intense emotional burnout of young teachers occurred in the first year of work at school, especially in the first six months (19.44%), in young teachers with work experience of 3 years (20.92%), and among young teachers with five years of work experience (21.48%).

Preventive work to eliminate the risks of emotional burnout of young teachers comprised: psychological and educational support; increasing the importance of the teaching profession; satisfying the need for recognition, the teacher's self-affirmation and self-expression; bringing young teachers together in professional communities; a Mentoring Institute for Young Teachers; and teaching young teachers how to self-regulate and prevent stress and burnout (with group and individual work).

The conclusions of the research can be applied to the practical activities of modern primary school teachers. The technology developed by the authors contributes to the prevention of early emotional burnout of young teachers, thus increasing their motivation for professional activity and the formation of professional competencies.

**Keywords:** risks, early emotional burnout, young teachers, prevention

## 1. INTRODUCTION

### 1.1. Identifying the Problem

The teaching profession brings enormous intellectual, psychophysical, emotional, and emotional costs. The rapidly changing realities in educational policy, with the introduction of new professional standards and the formation of competencies for the modern teacher place additional requirements on the teacher's personality and create tensions in the teacher's work. Teaching is complicated by many negative factors, one of which is the phenomenon of "emotional burnout".

The burnout syndrome arises in situations of intense professional communication under the influence of a variety of external and internal causes and leads to "dimming" of emotions, loss of sharpness of feelings and experiences, an increase in conflicts with other partners, indifference to the feelings of others, and a loss of a sense in the value of life and faith in personal strength.

The problem of emotional burnout has been addressed by Russian psychologists such as Boyko (1996), Vodopyanova & Starchenkova (2005), Mitina (2004), Orel (2001), Ronginskaya (2002), Formanyuk (1994), Nastyushina (2015), Novikova (2005) and Olshevskaya (2010).

Boyko (1996) investigated the conditions for the onset of the syndrome of emotional burnout, and developed diagnostics for identifying the stages of the syndrome in teachers.

Vodopyanova & Starchenkova (2005) explored the phases of emotional burnout in teachers. Mitina (2004) investigated the psychological causes of teachers' emotional stability, with its psychological content, genesis and dynamics. Orel (2001) emphasizes the importance of the self-regulation of personality, and the ability to leave stressful situations. Roginskaya (2002) explores the phenomenon of burnout of a specialist in social professions. Formanyuk (1994) defined

emotional burnout as a human condition caused by mental, physical, and emotional exhaustion. Miteva (2005) developed a stress management program with various training and exercises.

In modern science, it is assumed that emotional burnout occurs when teachers have been working at school for 10–15 years and have reached 35–40 years of age. However, experience shows that young teachers with 1 to 5 years work experience might also experience this syndrome. Young teachers suffer dysfunctional consequences when burnout adversely affects the performance of their professional activities and relationships with their students. It has been shown that a young school teacher spends so much effort and that their level of self-giving and self-control is so high that in practice, their mental resources are restored by the next working day. Some young teachers leave school during their first five years (Nastyushina 2015). Novikova (2005) studied the pedagogical problems that arise as a result of the emotional burnout of teachers. Olshevskaya (2010) developed a system of preventive measures to prevent emotional burnout. However, despite the fruits of these studies, there are still a number of problems arising in the study of the burnout syndrome of a teacher.

From our point of view, it is necessary to investigate the problems and identify the features and causes of early emotional burnout of young primary school teachers, and to develop preventive and correction measures aimed at reducing the intensity of emotional burnout. In order to develop resilience in the teaching staff, we must first find the causes. It is necessary to study the phenomenon of emotional burnout in those teachers whose teaching experience ranges from one to five years.

## **1.2. Developing the Problem**

The first mention of the phenomenon of emotional burnout in Russian science can be found in the works of Ananyev (1996), who used the term “emotional combustion” to refer to some negative phenomenon that occurs in people working in interpersonal professions and is related to interpersonal relations. In the mid-1990s, emotional burnout became the

subject of separate research in Russian psychology (Orel, 2001; Boyko, 1999; Formanyuk, 1994). For the description of the phenomenon investigated in this study, Russian authors used various terms: “emotional combustion” (Formanyuk, 1994), “emotional burnout” (Boyko, 1999), “mental burnout” (Vodopyanova & Starchenkova, 2005) and “professional burnout” (Vodopyanova & Starchenkova, 2005).

Mental burnout is characterized by a number of signs. These are behavioral changes (the person loses creative approaches to problem solving, often looks at his watch, is late for work, retires and avoids colleagues) in feelings (bad moods, detachment, “going into oneself”, increased irritability sense of guilt), in thinking (an inability to concentrate, doubts in the correctness of decision-making, indifference to results), and impaired health (poor sleep, headaches, fatigue) (Mityaeva, 2005).

Burnout is a dynamic process that occurs in stages, following the mechanism of development of stress (Olshevskaya, 2010).

Scientists distinguish three stages of the development of burnout. 1. A nervous (anxious) tension (mild form), which is created by the psycho-emotional atmosphere, increased responsibility, facing a problem. 2. Resistance, (protracted form), when a person tries to protect him/herself more or less successfully from unpleasant impressions. Finally, 3. depletion (chronic form), a decrease in emotional tone, which occurs when resistance has been ineffective (Vodopyanova & Starchenkova, 2005).

Professional destruction is the destruction, alteration or deformation of a person’s existing psychological structure in the process of professional labor (Miteva, 2005).

Professional burnout syndrome is an adverse reaction to work stresses, with psychological, psychophysiological and behavioral components (Miteva, 2005). Aggravated by effects of work stress, the moral and physical strength of a person is exhausted, they become less energetic, and their health deteriorates. Exhaustion leads to a decrease in contact with others, and this, in turn, leads to a heightened experience of loneliness. People who “burn out” have decrease motivation to work, develop an indifference to work, and the quality and productivity of their work deteriorates (Olshevskaya, 2010).

### **1.3. Purpose and Objectives of the Study**

The purpose of the study was to determine the risks of early emotional burnout of young teachers who had been teaching from 1 to 5 years. The objectives were to:

1. identify the causes of early emotional burnout of young teachers,
2. examine the features of emotional burnout of young primary school teachers,
3. develop preventive and corrective measures aimed at reducing the symptoms of emotional burnout.

### **1.4. Literature Review**

The majority of Russian researchers (Borisova, 2005; Orel, 2001; Boyko, 1999) define burnout syndrome as a state of physical, emotional and mental exhaustion. It is mainly found in social professions. This syndrome includes three main components: emotional exhaustion, depersonalization (cynicism) and the reduction of professional achievement.

Emotional burnout is understood as a complex of mental experiences and behavioral reactions, which affects the employee's health, physical and psychological well-being, as well as their interpersonal relations. Burnout syndrome is a response to long-term interpersonal stress at work.

Formanyuk (1994) defined emotional burnout as a person's condition caused by work, characterized by mental, physical, and emotional exhaustion. According to Boyko (1998) emotional burnout is a stereotype of emotional, (mostly professional) conduct. It is partly a functional stereotype, because it allows a person to ration and economically use their energy resources. Novikova (2005), identifies three factors contributing to the risk of burnout: 1) socio-psychological; 2) personality; 3) professional factors.

The social and psychological factors contributing to the development of burnout include experiencing injustice, social insecurity, level of support, job dissatisfaction, pay, career aspirations, age, teaching experience, and the teacher's gender. The personal risk factors include the quality of a person's tendency to attribute responsibility for the results of their activities to external forces - authorities, society, state, economic situation (external, external locus of control). The professional factors of burnout development, are a "painful dependence" on work, when "workaholism" and active enthusiasm for his/her professional activity are driven, not by the desire for creativity and value for the profession itself but by striving for social prestige, material benefits and power at the expense of the profession.

The main conclusion of Novikova's research (2005) is that the risk of burnout comes not from the duration of work (the length of service), but from dissatisfaction with work, the lack of personal and professional growth prospects, as well as personal characteristics influencing the intensity of communication at work.

Emotional burnout syndrome is a syndrome that develops on the back of chronic stress and leads to the depletion of the emotional-energetic and personal resources of the worker. Chronic fatigue is a specific type of fatigue, due to constant emotional contact with a significant number of people.

Some recommend that individuals learn to manage their emotional state, to think in a constructive way so as not to "get stuck" on negative experiences and not to hinder their creative growth but search for new alternative ways to overcome professional problems (Miteva, 2004).

Among many characteristics of burnout syndrome Maslach (1987) includes: a sense of emotional exhaustion, an inability to work with full energy, dehumanization, negativism towards people dependent upon them, and negative professional self-perception (reduction of personal achievements).

Professional burnout occurs as a result of the internal accumulation of negative emotions without a corresponding "discharge" or "release" of them. This leads to the depletion of personal emotional and personal

resources. From the concept of stress, Selye (1982) defines professional burnout as distress, or the third stage of the general adaptation syndrome — the stage of exhaustion.

Watts and Robertson (2011) demonstrated the link between the teacher's age and the degree of his/her emotional burnout. This showed that younger people were more vulnerable to emotional exhaustion.

Based on the results of a questionnaire of 146 young teachers from private higher education institutions in Shanghai, Sun (2017) concluded that the burnout rate of young male teachers was significantly higher than female teachers, and the degree of severity increased with an increase in teaching experience. Individual personality traits had significant predictive power for work burnout. It transpired that self-development counseling is an effective strategy to reduce the teachers' burnout and to improve their ability in emotional regulation.

Hopman et al. (2018) demonstrated that Dutch teachers with high levels of empathy and professional self-efficacy showed an increase in emotional exhaustion as a function of destructive behavior in class.

Sharp & Jennings (2016) explored the importance of school teachers' strategies for awareness of their emotional state and tolerance of stress in professional work. Study participants (teachers) reported changing their emotional responsiveness and approach to students through 1) emotional awareness of the center of attention, 2) emotional reassessment of situations and 3) the use of metaphors introduced in the framework of the Cultivating Awareness and Resilience in Education (CARE) program. The results show that CARE is a promising approach to support school staff experiencing stress and burnout.

Brunsting, Sreckovic, & Lane (2014) conducted a study on the professional burnout of special educators. They observed that teacher burnout occurs when teachers who are under stress for a long period of time experience emotional exhaustion, depersonalization, and lack of personal achievement (Maslach, 2003). Results associated with burnout include teacher exhaustion, teacher health problems, and negative student outcomes.



Wróbel (2013) demonstrated a relationship between empathy, emotional work (both superficial and deep) and emotional exhaustion among teachers. Analyzing a sample of 168 teachers from Lodz and its environs, Wróbel came to the conclusion that deep actions and a negative mood mediates the connection between empathy and emotional exhaustion in teachers.

Nizielski, Hallum, Schütz, & Lopes (2013) examined the self-reports of 300 teachers to determine their ability to assess their own emotions and the emotions of others. It turned out that teachers with a high ability to evaluate emotions tend to experience symptoms of burnout less often than others. They infer that the ability for self-analysis and self-reflection can help protect teachers from burnout, allowing them to prevent potential stressors and effectively interact with their students.

Hassan, Robani, & Bokhari (2015) conducted research among young and experienced teachers to investigate their well-being, improve their psychological health and their teaching success, especially their emotional intelligence (EI). This research suggests an integrated EI training, which can not only improve teacher performance but also reduce burnout syndrome and job dissatisfaction.

## **2. METHODOLOGY**

The study was based Boyko's technique "Study of burnout" (1996). This technique is designed to measure the level of symptoms of emotional burnout. It consists of a questionnaire, which includes 84 judgments. Interpretation of the results was carried out in three phases, which include four symptoms. The protocol involves three calculations:

1. The sum of points is determined separately for each symptom, taking into account the coefficient specified in brackets. For example, on the first symptom, a positive answer to question No. 13 scores 3 points. A negative answer to question number 73

- scores 5 points, etc. (the number of points is summed and the quantitative indicator of the symptom severity is determined).
2. The sum of the indicators of symptoms for each of the 3 phases of the formation of “burnout” is calculated.
  3. The final indicator of the “burnout syndrome” syndrome is the sum of the indicators of all 12 symptoms. The proposed method gives a detailed picture of the “burnout syndrome”. The severity index of each symptom ranges from 0 to 30 points, where 9 or fewer points indicates an unfulfilled symptom, 10 -15 points - a developing symptom, 16-20 points - an established symptom, while symptoms with 20 or more points are considered to be dominant in that phase or in the whole burnout syndrome.

A further step in interpreting the survey results is to understand the indicators of each development phase - “stress”, “resistance” and “exhaustion”. A possible score for each ranges from 0 to 120 points. However, the comparison of the points obtained for each phase is not legitimate, because it does not indicate their relative role or contribution to the syndrome. The fact is that the phenomena measured in the phases - the reaction to external and internal factors, psychological defense methods, and the state of the nervous system - are significantly different. From the quantitative indicators, it is legitimate to judge only how each phase has been developed - to a greater or lesser extent. Where there are 36 or fewer points then the phase has not developed, 37-60 points indicates that the phase is in the formation stage, while 61 or more points indicates that the phase has fully developed.

Using the burnout diagnosis developed by Maslach and Jackson (1981) and modified by Vodopyanova & Starchenkova (2005) we determined the severity of professional burnout on three scales. The larger the score on each separate scale, the more the teachers exhibit different aspects of “burnout”. The total number of points indicates the severity of “burnout” (max. 132 points). The test for determining the level of emotional burnout consists of 22 questions each with 6 answers: never, very rarely, sometimes, often, very often, every day.

### **3. RESULTS**

#### **3.1. The Pre-Test**

A survey was conducted among 32 young primary school teachers working in schools in Kazan and Zelenodolsk. Three groups were identified, those with up to 1 years' experience ( $n = 10$ ), those with 2-3 years' experience ( $n = 10$ ) and those with 4-5 years' experience ( $n = 12$ ). The initial survey used the methods of Boyko (1996) and Vodopyanova & Starchenkova (2005).

Boyko's (1996) technique was designed to measure the level of symptoms of emotional burnout as described above.

The sample can be divided into three groups, according to the development of burnout phases:

- Group 1 ( $n = 11, 50\%$ ) the syndrome is fully developed in at least one of the phases (total number of points in one of the phases is  $\geq 61$ );
- Group 2 ( $n = 9, 29.5\%$ ) the syndrome is in development in at least one of the phases total number of points in one of the phases is in the range from 37 to 60);
- Group 3 ( $n = 12, 19.8\%$ ) the syndrome was not developed (the total number of points in any of the phases does not exceed 36).

Thus, the largest group was teachers with a burnout syndrome, developed at least in one of the phases. The smallest is the group where the syndrome was not developed.

We now consider the possible dependence of burnout on work experience. Figure 1 shows the dynamics of the development of emotional burnout syndrome for individual phases of teachers with work experience from 0 to 5 years.

**Table 1. The level of symptoms of emotional burnout in young teachers**

Full name	Age (years)	Experience (years)		Anxiety		Emotional burnout, phases		Causes of frequent burnout		
		1*	2*	2*	3*	Experiencing traumatic circumstances	Expansion of the emotional thriftiness sphere	Inadequate Emotional response		
1	2	3	4	5	6	7	8	9	10	
1. O.N.	21	1	47-high	36- norm	14	23	3	0	2	17
2. A.B.	23	3	41- norm	33- norm	8	69	34	2	25	17
3. K.P.	22	2	43- norm	29- low	10	38	10	0	15	10
4. A.C.	25	4	54-high	34- norm	32	19	18	11	3	12
5. M.A.	24	4	38- norm	33- norm	29	75	10	17	11	27
6. C.A.	21	1	53-high	37- norm	27	58	63	2	2	15
7. K.A.	26	5	36- norm	33- norm	45	63	28	22	33	20
8. U.P.	22	3	61- high	37- norm	36	41	35	9	3	18
9. A.B.	22	2	44-high	37- norm	15	46	48	2	5	18
10. E.O.	21	1	39- norm	32- norm	14	43	47	5	0	18
11. G.H.	21	1	54-high	32- norm	25	67	39	0	0	0
12. C.B.	22	2	52- high	55-high	17	30	21	14	13	20
13. L.B.	27	5	43- norm	33- norm	3	64	25	0	25	15
14. C.K.	23	2	53-high	49-high	25	17	79	7	2	15
15. H.I.I.	26	4	43- norm	31- norm	14	56	65	8	1	4
16. O.C.	27	5	38- norm	36- norm	18	1	5	0	16	0
17. G.D.	26	4	40- norm	56-high	72	97	69	25	43	15
18. D.G	27	5	55-high	34- norm	21	68	23	-0-	25	10
19. L.D.	24	4	53-high	32- norm	17	25	33	7	20	20
20. O.A.	25	4	44- norm	30-low	26	31	20	17	0	12
21. L.H.	26	4	34- norm	39- norm	11	99	40	2	25	28

Full name	Age (years)	Experience (years)	Anxiety		Emotional burnout, phases		Causes of frequent burnout												
			1*	2*	3*	Experiencing traumatic circumstances	Expansion of the emotional thriftiness sphere	Inadequate Emotional response											
Lch*	Set*																		
22. B.C.	21	1	48- high	43- norm	3	37	15	-0	3	12									
23. H.A	21	1	43- norm	35- norm	13	48	17	4	16	4									
24. A.B.	26	4	40- norm	28- low	32	47	50	9	8	23									
25. T.M.	21	1	61- high	31- norm	49	69	56	15	22	15									
26. L.B.	22	2	54- high	35- norm	6	43	20	4	0	13									
27. T.C.	21	1	51- high	53- high	33	66	24	4	20	17									
28.B.A.	22	2	56- high	34- norm	6	37	41	-0	8	18									
29. A.	21	1	53- high	37- norm	11	36	62	5	2	8									
30. H.B.	21	1	44- high	31- norm	65	14	28	9	3	11									
31. U.B.	23	3	54- high	56- high.		66	25	9	22	15									
32. A.P.	23	3	56- high	53- high.		69	57	16	24	28									

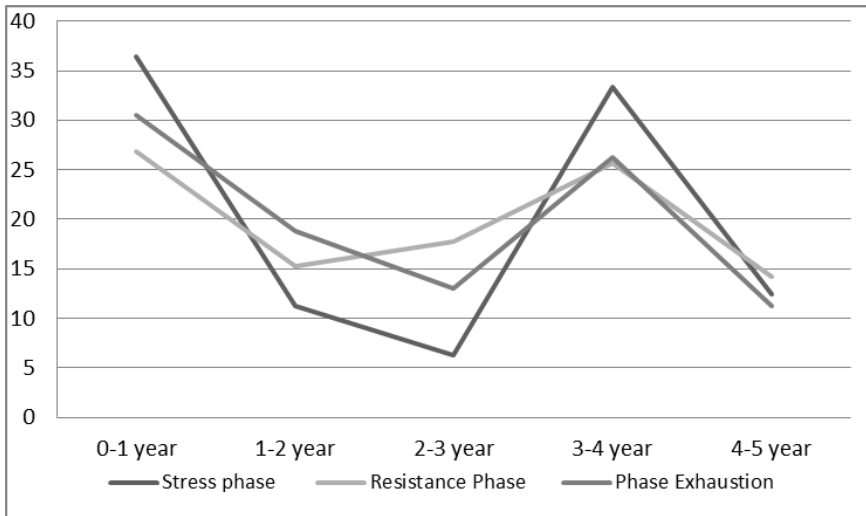


Figure 1. Dynamics of the development of emotional burnout syndrome in different phases of teachers with 0-5 year's work experience.

An analysis the indicators of different phases shows that in the “stress” phase, teachers with 0 to 1 year's work experience have the highest rates, while rates are lower for teachers with 4 to 5 years' experience. The burnout diagnostic results by Maslach and Jackson (1981) adjusted by Vodopyanova & Starchenkova (2005) are presented in Tables 2 and 3.

Our study showed that, among teachers with experience from one to five years of age and from 21 to 29 years of age, the cause of burnout is the discrepancy between the expectations associated with the profession and reality. Our survey results showed that young teachers expect themselves to be competent specialists in the field of pedagogy and methods of primary education. In reality, they feel inadequate when faced with situations for which they were not prepared.

The study, showed that young primary school teachers with ½-1 year's teaching, experience the highest level of emotional exhaustion - 20.96%. This conflicts with the results of Mitina (2005), which indicate that young specialists have better mental health indicators than those of teachers with greater experience.

**Table 2. Burnout rates in primary school age groups**

Age	Emotional exhaustion	Cynicism	Professional success	Criterion	Significance level
21-22	19.44	7.70	30.19	t-Student criterion	P > 0.05 P > 0.05
23-25	19.29	7.55	28.79	t-Student criterion	P > 0.05 P > 0.05
26-28	21.48	7.29	31.52	t-Student criterion	P < 0.05 P > 0.05

**Table 3. Burnout rates for primary school teachers, depending on the length of service from 1 to 5 years**

Experience	Emotional exhaustion	Cynicism	Professional success	Criterion	Significance level
0.5-1	20.96	6.91	28.23	t-Student criterion	P > 0.05
1-3	19.24	7.19	28.57	t-Student criterion	P > 0.05
3-5	20.74	8.21	30.19	t-Student criterion	P > 0.05

The high levels for parameters 5, 8, 10 show existing symptoms, which indicate that at the beginning of their professional live, young teachers fail to conserve their emotions adequately, limit their emotional impact; attempt to simplify their professional duties and, most importantly, begin to exclude emotions from their professional activity.

The analysis of the individual psychological characteristics of young teachers leads to the conclusion that people who are restrained are more inclined to develop the first phase of burnout (stress), have reduced emotional sensitivity, poor emotional reactions, are less disciplined, and are dissatisfied in their relations with their leader.

Development of the second phase of burnout (resistance) is promoted by increased anxiety, an unsatisfactory attitude to work, an unfavorable team climate, low goals, increased aspirations, subordination, and conformity.

The development of the third phase of burnout (exhaustion) is characterized by introversion, lack of self-confidence, and high self-control.

Young specialists experiencing professional burnout exhibit symptoms of dissatisfaction with themselves (8.93%), caging (26.86%), experiencing psycho-traumatic circumstances (18.60%), inadequate selection of emotional response (33.47%), emotional and moral disorientation (29.75%), greater emotional restraint (26.86%), and depersonalization (24.79%).

The following stages of professional burnout are most pronounced among young teachers: the “Stress” phase (for 25.62%), the “Resistance” phase (for 30.585). These indicate a high level of psycho-emotional stress in their professional activities.

The following socio-psychological characteristics influence the formation and development of the professional burnout syndrome in the young teachers’ activities: “satisfaction with the profession” (2.62, with  $p < 0.05$ ), “importance/prestige of the profession in society” (2.45, with  $p < 0.05$ ), “relationship with management” (2.33, with  $p < 0.05$ ) and “number of students in a class” (2.54, with  $p < 0.05$ ).

There is a correlation between symptoms of professional burnout with some characteristics of the interpersonal relations of young professionals with students and colleagues. Young specialists with “cooperative-conditional” (30.5%) and “independently-dominant” (29.0%) types of communication are at the maximum risk for developing professional burnout.

The main symptoms of emotional burnout in teachers were inadequate selective emotional response, reduction of professional duties, emotional and moral disorientation, experiencing traumatic circumstances, and expanding the scope of their emotional restraint.

### **3.2. The Intervention**

In order to prevent early emotional burnout of teachers in the experimental group, various exercises were conducted during the 2018-2019 school year, aimed at developing the skills of self-regulation, and increasing the level of emotional stability:



The purpose of the “Ladder” exercise is to enhance awareness of oneself as a person who in a certain period of life and professional activity. The participants are given leaflets with a schematic depiction of a ladder, and asked to examine it carefully and mark their current location on the ladder. As they progress through the exercise, the facilitator asks:

- Think and answer, are you going up or down?
- Does your location on the stairs suit you?
- What prevents you from being upstairs?
- Are you able to eliminate the causes that prevent you from moving up?

The objective of the exercise “Distributed in order” is to convey the importance of the ability to switch social roles for the preservation of their mental health and creative activity, and the awareness of your “I”. Teachers are invited to arrange in order of importance (in their opinion) - children - work - husband (wife) - I - friends, relatives.

After some time, the trainer suggests a variant of the optimal distribution of the list:

1. I
2. Husband (wife)
3. Children
4. Work
5. Friends, relatives

The participants are then invited to reflect on the results.

In “My virtues” a list of virtues is drawn up on a large sheet of paper and placed in a prominent place. Regularly (at first once a day, then less often) further virtues are added. To do this, the teachers need to carefully study themselves, their own characteristics, and try to peer into their habits and actions. If an individual cannot find another dignity in him/herself, they must turn first to the closest people, and after a while, to those most

different to themselves. They will help find the individual's worth and all the good things that say will be included in the list of "My virtues."

A further exercise is "Pleasure." One of the common stereotypes of everyday mental hygiene is the idea that our passions and hobbies are the best way to rest and recover. These is usually limited since most people have no more than one or two hobbies. Many of these activities require special conditions, a specific time or personal conditions. However, there are many other opportunities to rest and recuperate. The participants are given sheets of paper and are invited to write five daily activities that bring them pleasure. They are then asked to rank them according to the degree of pleasure. They are told that this is a resource that can be used as an ambulance for recuperation. The exercise includes flash training, a video recording with relaxing images or viewing slides with calm music.

Finally, in "A bag of wishes" the participants pull out positive wishes and read them out (for example, In the near future, you will be especially lucky! You will have a surprise today!)

### 3.3. The Post-Test

Emotional burnout diagnostics on the young primary school teachers were carried out using the method of Maslach and Jackson (1981) as

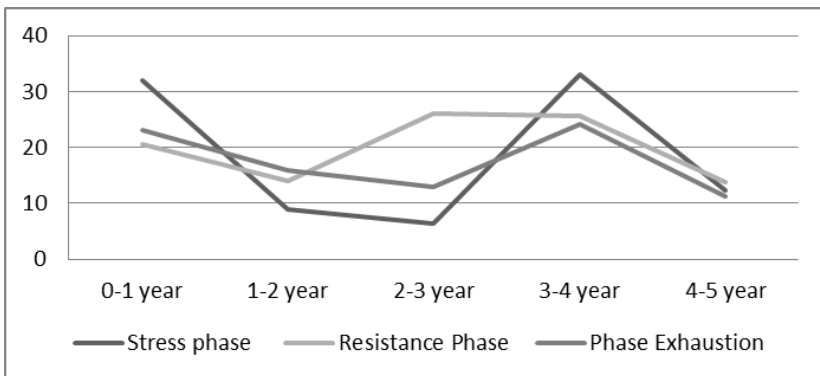


Figure 2. Results of the emotional burnout diagnosis at the control stage of the experiment.

modified by Vodopyanova & Starchenkova (2005). The results are shown in Figure 2. The greater the points on each separate scale, the more teachers show different aspects of burnout. The total number of points indicates the severity of burnout (max. 132 points). The test for determining the level of emotional burnout consists of 22 questions with 6 answers: never, very rarely, sometimes, often, very often, every day.

## CONCLUSION

The cause of burnout after 0-5 year's teaching is the discrepancy between the expectations associated with the profession and reality. One of the sources of these expectations is a set of beliefs regarding professionalism and pedagogical work. Young teachers feel inadequate when faced with situations for which they were not prepared.

The study showed that the burnout risk factors for young teachers include external and internal factors, personality, status-role, professional and organizational factors. The personal risk factors for burnout include: the propensity for introversion; reactivity as a characteristic of temperament, manifested in the strength and speed of emotional response; low or excessively high empathy; rigidity and authoritarianism towards others; low self-esteem and self-esteem. We have identified status-role risk factors that include: role conflict; dissatisfaction with professional and personal growth; low social status; role behavioral stereotypes; and rejection by the reference group. The professional and organizational (corporate) risk factors are those variables that lead to a high level of organizational stress. The study demonstrated that the emotional burnout of young teachers takes place in three stages: 1. The "Nervous tension" phase, created by a chronic psycho-emotional atmosphere, destabilizing situation, and increased responsibility. 2. The "Resistance" phase in which a person tries to protect himself from unpleasant impressions. 3. Phase exhaustion - the weakening of mental resources, reducing emotional tone.

More intense emotional burnout occurs in young teachers in the first year of work at school, especially in the first six months (19.44%), young

teachers with three year's work experience (20.92%); and among young teachers with five years' work experience (21.48%). Burnout occurs when the internal and external requirements constantly prevail over internal and external resources, leaving the teacher in a state of non-equilibrium. Non-equilibrium states occur when life is unfavorable (for example, in critical, difficult periods, in difficult situations) and often cause borderline and pathological disorders. These situations break the boundary that separates the usual conditions from the changed conditions. Under the influence of psychogenic factors, the reserve capabilities are exhausted and the psycho-physiological and socio-psychological mechanisms, can no longer provide adequate reflection and regulatory activity. The adaptation barrier is breached, breaking dynamic stereotypes, resulting in psychological disorientation, and mental crisis. This is manifest as a non-equilibrium state. A continuous and progressive imbalance inevitably leads to burnout. Consequently, burnout is not just a result of stress, but of uncontrollable stress.

## **DISCUSSION**

Experience shows that the majority of young teachers leaving the education system do so in the first year of practical teaching. Novice teachers have significant difficulties in their professional development. We found that the novice teacher experiences an adaptation syndrome, exhibiting signs of an increased level of anxiety, and a heightened sensitivity to stress factors.

In the first year of professional activity, a young teacher experiences many stresses. Firstly, this is an emotional-mental disorder as a result of the impossibility of overcoming the difficulties that arise, which are associated with "adaptation" - adaptation to the conditions and functions of professional activity. During the adaptation period, a young teacher suffers from a lack of information about the specifics of the educational organization and the pedagogical activity itself, of information about the team, the parents and society, and also realizes that he/she does not have

the necessary skills. We found that in the first year at school, teachers had difficulty in communicating with parents, students, and colleagues. This is explained by the low level of communication skills and insufficiently developed practical skills.

Another reason for the young teacher's dissatisfaction with his/her professional activities and the reason for leaving the educational organization is dissatisfaction with the facilities in their permanent workplace - poor provision of materials and technical resources, and a large amount of paperwork and reporting.

The study, showed that special psychological work to eliminate emotional burnout should include three main areas:

1. removing stressful conditions for employees arising from intense activity, through developing self-regulation skills, learning relaxation techniques and controlling their own physical and mental state, thus increasing resistance to stress;
2. development of skills of verbal and non-verbal communication, which are necessary for establishing favorable relations with colleagues and management,
3. work on the development of young teachers' skills to resolve conflict situations and find constructive solutions; the ability to achieve goals and revise the system of values and motives that impede professional and personal self-improvement.

We have developed seven recommendations for young teachers, whose teaching experiences ranges from one to five years:

1. It is necessary to formulate short-term and long-term goals. This "planning" helps to provide feedback and increases the degree of self-education.
2. It is necessary to use time-outs. Rest from work and other loads will help to escape from life problems. Find an occupation that brings rest and satisfaction.

3. It is necessary to master the skills and habits of self-regulation (relaxation, ideomotor acts, setting goals and positive inner speech).
4. The need for professional development and self-improvement. It is important for a young teacher to collaborate with the professional community, to study advanced training courses, and to participate in conferences.
5. The young teacher should avoid unnecessary competition. The desire for continuous success in work creates anxiety, and makes the teacher aggressive, which contributes to the emergence of burnout syndrome.
6. Young teachers need emotional communication. When a teacher analyzes his/her feelings and shares them with others, the likelihood of burnout is significantly reduced or not so pronounced.
7. Teachers need to keep fit. It is important to exercise, play sports, and stick to a rational diet.

Professional burnout occurs as a result of the internal accumulation of negative emotions without a corresponding “discharge” or “release” from them. It leads to the depletion of an individual’s emotional and energy and personal resources. The system of training exercises developed in this study helps the young teacher to relax and self-regulate their mental state.

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*Chapter 14*

**PROFESSIONAL MAINTENANCE  
OF WELLBEING ACTIVITIES  
FOR NOVICE TEACHERS: THEORETICAL  
AND METHODOLOGICAL CONSIDERATIONS**

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**ABSTRACT**

Teachers have serious difficulties at the start of their teaching career. These difficulties are various but some of the most common concern their pupils' social and emotional wellbeing. This research determined the components of professional maintenance of wellbeing activities for novice teachers.

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Maintaining these skills is impossible without an understanding of the most widespread professional difficulties, both general and personal, faced by novice teachers in the activity of social and emotional wellbeing. It is especially important to single out fragmentary ideas about the theory of children's upbringing, problems in the use of knowledge gained through practice, and, above all, in the development of technologies of practical humanization for bringing up children.

The research showed that the maintenance of personal and professional development of a novice teacher has many facets.

These include: diagnostics of their professional difficulties; developing their personal attitude in dialogues with colleagues, as a bearer of knowledge and ignorance in the professional sphere; equipping the novice teacher with new knowledge and technologies for social and emotional welfare; affiliation with a professional community; interaction with various professional communities to experience different types of social practice; involvement in real innovative practice, initially in the context of their own educational organization; developing their own roadmap for professional improvement; reflecting on their professional activity, including social and emotional wellbeing as a specific direction; and the need to take a positive position in social and emotional wellbeing activity.

**Keywords:** upbringing activity, personal and professional position, novice teacher, professional difficulties, maintenance

## INTRODUCTION

For many teachers, and particularly for young, novice teachers, social and emotional wellbeing has been and remains the most unattractive and most complex component of their professional activity. Modern researchers often refer to upbringing as a spiritual practical activity, involving the teacher with meanings, values, and their relations with the child.

The question is whether it is possible to teach this? In terms of the transformation of knowledge, skills, even the formation of competencies, it is an impossibility.

For the teacher, knowledge and technology are not as important as their personal and professional position to social and emotional wellbeing



(Bederhanova 2002; Grigor'eva 1999). The development of the teachers' interpersonal relationships with colleagues, and their role in the transmission of professional knowledge and ignorance is also significant. This is particularly important in the first years of teaching.

Unfortunately, many novice teachers are not equipped to participate in the social and emotional wellbeing process (Sergeev and Borytko 2014; Perspektivy 2011). This goes back to unsatisfactory preparation in the high school (Human-Vogel and Dippenaar 2013; Grossman and Loeb 2010).

Nevertheless, under certain conditions, novice teachers can start to participate effectively in the social and emotional wellbeing process.

## **METHODOLOGY**

The research included a review of the relevant scientific literature, questioning, and interviewing novice teachers to identify the most common problems of social and emotional wellbeing.

It explored the aspects of how the social and emotional wellbeing process for these teachers could be supported and developed. The evidence base included documents defining the modernization of pedagogical education in the Russian Federation.

## **RESULTS**

The research showed that novice teachers experience difficulties in this area that are both general and personal.

General difficulties include:

- fragmentary ideas of the theory of social and emotional wellbeing, psychological aspects;

- problems in applying their theoretical knowledge and, in particular, in developing practical and humanistic technologies in the social and emotional wellbeing process;
- lack of knowledge of how to study children and their community;
- problems in creating relationship with colleagues in the pedagogical community; problems in creating relationships with parents of students.

The personal difficulties include:

- the inculcation of high personal and professional standards for novice teachers at the beginning of their teaching;
- inadequate personal and professional self-assessment;
- low motivation to engage in pedagogical activity, including social and emotional wellbeing.

Continual professional development for novice teachers must take into account their specific difficulties.

Thus, it will include:

- diagnostics of professional difficulties;
- development of their interpersonal attitudes for participating in dialogues with colleagues;
- transmission of professional knowledge and ignorance;
- new knowledge of, and technologies for social and emotional wellbeing;
- affiliation into a professional community;
- interaction with various professional communities to include the novice teacher in different types of social practice;
- inclusion of a novice teacher in real innovative practice, initially, in their own educational organization;
- development of a personal roadmap for professional improvement;

- reflection on their professional activity, including specific activity on social and emotional wellbeing.
- The need for a positive approach to the social and emotional wellbeing process.

This professional development will enhance their personal and professional position in respect of their social and emotional wellbeing activities and is essential for the development of a comprehensive personal roadmap (Professional'naya 1982). It can be achieved in a number of ways.

Mentoring currently plays an important role in educational organizations (Mena et al. 2017). However, the novice teacher's professional circle of contacts should not be limited to communications with their mentor. The wider the circle and the more diverse the pedagogical experience of these colleagues, the faster they will master the profession (Umnyashova et al. 2012).

Professional difficulties are associated, on the one hand, with an incomplete knowledge of social and emotional wellbeing theory, the psychology and the problems of applying the theory in practice, and on the other hand, with the professional demands on a novice teacher. This often causes novice teachers to fear discussing their problems with colleagues. They expect negative reactions from colleagues and the administration. This situation increases their anxiety, and they experience psychological discomfort (Simonova 2015). In such cases there is a need for movement from both sides, but particularly from the mentor (Borisova 1983; Lukina 2013).

Mentoring as a separate activity has been promoted in recent years, although, of course, it has always existed in the national school. Yet, there is no consensus in the pedagogical community about the terminology for this role in relation to the novice teacher; both 'mentor,' and 'tutor' are used to describe the role.

Despite the title, the teacher-mentor needs to have a number of qualities and competences for success in this activity. First, s/he has to be highly qualified in various pedagogical field and resources. S/he must have

a desire to share the knowledge and technologies, and the ability to create a favorable climate for cooperation.

The teacher-mentor should not be "overseeing" the novice teacher, s/he has to be "nearby," offering possibilities for cooperative studies. Frequently mentoring is benefits both parties because the novice teacher can have suggestions and ideas that are interesting and useful for the mentor. Certainly, a mentor should be a significant person for a novice teacher.

One of the mentor's main tasks is to build an individual roadmap for the novice teacher's professional and personal development, and to help to develop their personal and professional position.

It is important for the novice teacher, not only to study their colleagues' experience, but also to be included in real innovative practice, initially in their own organization. During their higher education career, future teachers do not always have an opportunity to learn about and master new educational technologies, including those for social and emotional wellbeing. It would be expedient to develop a special training program which would allow them to be directly involved in innovative practice of various educational organizations.

Modern upbringing does not confirm to boundaries, and increasingly goes beyond educational institution. Various organization - public, cultural, religious, political parties and movements, children's public associations, youth subcultural communities, etc. - take part in the process. Today it is seen as a multi-subject strategy for social and emotional wellbeing (Polisub"ektnost' 2009; Isaev and Slobodchikov 2013).

This creates an urgent need to include a novice teacher in different types of social practice so as to focus on the child's personal development based on humanistic values (Stepanova and Parfenova 2017). The novice teacher must have the competences to counteract the influence of anti-social subjects. Personal development for novice teachers in social and emotional wellbeing should also include the organized interaction with various professional communities, not only those directly related to education. Cooperation with theatrical, art and other communities not only

expands the teacher's horizons, but also helps with mastering new skills and abilities that will enrich their professional skills.

However, the inclusion of the novice teacher in pedagogical communities is of particular importance. Typically, such communities focus their communications on many different subjects, making it easier for a novice teacher to join a virtual community, than a real one, because they already have experience of online communities. These communities have a number of advantages for a novice teacher. They are informal and entry is voluntarily. The choice of community is dictated by the teacher's professional and personal interests. Views can be exchanged regardless of age, the level of experience or the status of participants. All this gives a novice teacher the chance to overcome their fear of more skilled colleagues. It provides a feeling of support, allowing them to get acquainted with methodical research findings, abstracts of lessons, social and emotional wellbeing events, and materials used by colleagues from other schools. It also gives a wider perspective on the profession through involvement in projects of personal interest and creates situations in which to master the values and norms of group interaction. The creation of a network community by the novice teachers can also have a positive effect. They have an opportunity to share their problems, to learn whether others have similar problems and how to solve them. The ability to reflect on their work is one of necessary conditions for the professional development of the novice teacher. It should be noted that modern teachers, weighed down by requirements that are often unrelated to their professional activities, pay less attention to reflection, especially when it concerns social and emotional wellbeing. Reflection is closely connected with the teacher's ability to problematize their activities, and thereby determine ways to improve based on their personal resources. The reflection of a novice teacher is closely connected with his or her independence. Inadequate reflection results in the novice teacher not being able to understand and correct errors in his/her work and to see possibilities for its development.

Reflection on social and emotional wellbeing activities requires special preparation. It is connected with the teacher's understanding of the true

motives and goals of the student's actions. The teacher's reflection on their work on social and emotional wellbeing may focus on analyzing:

- the students' activities (goal, their motives for their participation, their position in it);
- the relationship developing in the children's community;
- results of the social and emotional wellbeing process;
- actions of the colleagues working with him/her in the class;
- relationship with colleagues in a teaching network;
- his relationship with the students' parents.

Finally, reflection gives the novice teacher the chance to affirm the choice of their chosen profession, and the legitimacy of their own decisions.

The entry of a novice teacher into a profession is connected with success of their first steps (Kim and Roth 2011; Michel 2013). It is very important that the work of a young specialist is not only exposed to criticism from his colleagues, the school administrations (as it often happens), but that the positive moments in his work are constantly noted. Just as for students, it is possible to create situations of success by providing the areas of activity where success is highly probable. This activity in social and emotional wellbeing can be connected with his hobbies. Success can also be maintained through network communities.

Although a novice teacher often has difficulties in establishing relationships with his students, they can give him psychological support through the influence of reputable teachers in the school.

Frequently, to facilitate building relationships with students, a novice teacher tries to participate in their network communities where communication is less formal. A note of caution is that such communities are sometimes used by some pupils for bullying teachers.

The continual professional development of novice teachers for social and emotional wellbeing activities requires them to develop personal roadmaps taking into account their own difficulties.

## DISCUSSION

The novice teacher has to engage in life-long vocational education. This brings problems in the development of their skills for independent work which are first formed during their student days and continue to develop throughout life. A mentor can assist in this process, initially providing scope for independent decisions and actions, while observing a necessary balance between guardianship independence. The need for serious psychological training for students in higher education pedagogical institutions is a long-standing issue. Such training is of fundamental importance for developing social and emotional wellbeing skills and for understanding the modern child. Unfortunately, this psychological preparation leaves much to be desired and is left to the novice teacher's independent work. This work will be more effective if, in parallel with increasing their psychological knowledge, they have an opportunity to discuss with colleagues and be mentored in psychological analysis of the various situations that arise in their daily practice.

The problem of mastering an initial toolkit of methods for the social and emotional wellbeing process is still important in higher education institution. These techniques may include:

- organizing conversations and discussions;
- pedagogical support of children's project activities;
- communicative games;
- children's performances and concerts;
- collective creative events;
- hiking trips.

The novice teacher needs to be able to assist the school student in establishing contacts with the group, to search for friends, to develop group norms and rules, and to work with the mood and spirit of the children's group and community. Without these elementary techniques the novice

teacher cannot act fully even in the simple organization of students' activities.

## **CONCLUSION**

Every educational institution has an interest in ensuring that a novice teacher joining its community has all the competencies they need in their daily professional activities. Unfortunately, this does not happen in practice. A novice teacher experiences specific difficulties, not least the psychological tension, which is encountered when joining a new team of colleagues. The difficulties are also connected with a lack of competencies in subject teaching, and in organizing social and emotional wellbeing activities. It is also obvious that there are problems in forming relationships with students and their parents. Every teacher is not only a professional, but also a personality and those personal qualities are no less important for success of his work at school. His motives, purposes, interests, and horizons are significant and especially important in social and emotional wellbeing. It demands constant personal, and not just professional, improvement and it is clear that novice teachers need support. This assistance should come, not only from their mentor (if there is one), but from all members of the pedagogical community, and from the school administration. It is necessary to remember that novice teachers often come to the school with ideas and initiatives. They are the "fresh blood" which is so necessary for the development of the educational organization.

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*Chapter 15*

**DEVELOPING AN EFFECTIVE SUPPORT  
SYSTEM FOR NOVICE TEACHERS  
IN MODERN SCHOOLS**

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**ABSTRACT**

In the current climate of shifting educational paradigms there are new requirements for teacher education and novice teachers' competence. It is particularly important that teachers are mobile, flexible, able to adapt to social changes, and prepared for constant development and innovative challenges. They must be achievement-oriented and demanding of their own reflective, intellectual, ICT and communication competencies. This chapter provides an insight into novice teachers' professional adaptation during the period of their induction. It highlights the main psychological and pedagogical difficulties that novice teachers face, together with the

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main forms for supporting them to facilitate their further professional development, and promote their self-realization and professional ambition. The literature review demonstrates the attention paid to this topic by various scientific schools. The chapter addresses: creating conditions for the successful adaptation of novice teachers, identifying their professional problems and developing ways to prevent these problems in their future work, facilitating their engagement in all aspects of school life, supporting their development as creative and unique individuals, and encouraging their professional thinking and preparation for innovation and modernization. In summary it demonstrates the importance of the issue and aspects related to novice teachers' adaptation in today's schools.

**Keywords:** pedagogical support, professional adaptation, difficulties, novice teachers, contemporary school, mentoring, intrinsic motivation, encouragement

## INTRODUCTION

Creating the conditions necessary for the professional adaptation of novice teachers is an important issue in the current system of education. It is becoming even more important when the goal of developing a pool of teacher candidates is given national priority. Usually when new teachers join schools and start their adaptation, they experience stress and burnout. For their organizations it is crucial to ensure that they do not disrupt the usual order of the educational process. Consequently, many educational organizations are concerned with creating the conditions necessary for the continuing personal and professional development of novice teachers and are continuously seeking to facilitate the process of teacher induction and adaptation. Addressing this issue effectively is a current priority. Professional adaptation relies on professional development and appreciating the nature of a teacher's work. Every novice has to go through an apprenticeship, organized and reflected upon in the light of previous experience.

Thus, the issue of teacher induction is as important as the issue of teacher education, because induction is one of the key moments in the

teacher's career defining future professional development. It would be unreasonable to suggest that, up until now this issue has not been addressed. However, contemporary understanding of the problem has been significantly affected by the decreased prestige of the teaching profession, together with the lack of governmental support and social security. Cumulatively, this makes it necessary for teachers to seek new ways of developing their professional identity so that they prioritize continuing professional development, and their students' wellbeing as well as their own resilience.

Personal strategic goals and motivation predetermine the ways of how novice teachers adapt to their new professional life. Garunova (1998), Pidkasisty (2000) and Thomas & Mueller (2017) argue that teachers who are unable to deal with induction effectively become more conformist, self-conscious, and lack initiative. This significantly damages the development of their identity as a teacher.

## **Purpose and Objectives of the Study**

The object of the study was to:

- Gain insights into the process of novice teachers' professional adaptation through a review of the psychological and pedagogical literature.
- Identify the factors influencing the effectiveness of novice teachers' professional adaptation within modern schools.
- Identify and test empirically the pedagogical conditions for effective professional adaptation of novice teachers.

## **Literature Review**

The issue of teacher education and induction has long been studied by researchers and practitioners. Various aspects of novice teachers' work

were discussed in the works of Abulkhanova-Slavskaya (1980), Amonashvili (1990), Kuzmina (1995), Zeichner (1989), and Bastian & Marks (2017). However, despite its current importance, this issue is far from a priority in the current field of education and psychology. We note that the most impressive educational results come from the team effort of novice teachers and other school staff. For example, in Japan novice teachers work with subject mentors, in South Korea with head teachers and deputy heads and in Australia with head teachers and mentors. Novice teachers in the Netherlands are supported by university tutors and school mentors. From an analysis of both Russian and international literature, we conclude that it is essential to provide novice teachers with support by organizing special programs, seminars, mentoring sessions and online courses.

We believe that successful adaptation happens when the level of teacher education matches the requirements of teachers' professional standards. If teachers experience problems during their induction, it indicates that their level of professional competence does not match the requirements of the teaching profession. Timely measures aimed at overcoming induction problems can facilitate professional adaptation and this in turn leads to better quality teaching.

At the beginning of their career every teacher goes through three stages:

- *Professional induction and adaptation.* The main aspirations at this stage are to be on par with other teachers, and not to appear ridiculous and helpless.
- *Self-Realization.* At this stage teachers realize that they have acquired some experience and can reflect on it. Teachers come to understand what they need to teach and how to teach it. They develop their own teaching style.
- *Professional mastery.* Teachers understand a higher meaning of teaching. They attempt to summarize and reevaluate their experience, to comprehend it and review it against existing professional norms.

A teacher has to have several personal characteristics. They must be free and independent, humanitarian, spiritual, creative and practical.

The issues related to the role of teachers in society and the methodology and theory of their development have a long academic tradition and were developed by Arhangelskiy (1980), Belozerceva (1989), Shcherbakov (1980), Petty & Hogben (1980), and Yaakobi & Sharan (1985).

The multifaceted nature of the teaching profession has been studied in the seminal works of Kulyutkin (1986), Makarenko (1983), Slastenin (1981) Chang, Fan & Chen (2017), Boylan (2018) Hodges (1982), McIntyre (1983) and Nigris (1988), highlighting how the teachers' personality and their creativity develop. Abdullina (1990) and Gonobolina (1965) focused on issues of teacher education. Vershlovskiy (1984), Hogben & Petty (1979), and Hogben & Lawson (1983) studied the patterns of teachers' professional development during their induction. The works of Kondratyeva (1986) and Lushnikov (1991) deserve special attention for their analysis of beginning teachers' induction. Mitina (1995) and Khodakov (1978) focused on a number of specific interrelated aspects of novice teachers' adaptation. The problems that novice teachers experience in their professional adaptation can be divided into several groups:

- Problems stemming from lack of competence in the fields of psychology, pedagogy and teaching methodology.
- Problems related to their unpreparedness to be role models and moral leaders for their students.
- Problems stemming from communicative incompetence.
- Problems related to their personal characteristics.
- Social problems.

## **Methodology**

From the analysis of theoretical works and practical activities we hypothesized that novice teachers' professional adaptation is more

successful within positive socio-economic climate in which the novice teacher has the support of a mentor and engages in professional self-development.

To test the hypothesis we carried out a review of philosophical, psychological and pedagogical literature by Russian and international authors, employed diagnostic methods (including surveys, interviews, informal conversations, analysis of novice teachers' professional intentions and expectations); direct and indirect observations, document analysis, and statistical data analysis to interpret the data and evaluate the results.

The experimental work was carried out schools affiliated with Kazan Federal University (general education comprehensive schools No. 15, No. 103, comprehensive schools specializing in advance study of certain subjects No. 167, No. 171, grammar schools No. 3, No. 10, No. 13, No. 15, No. 20 as well as a number of rural schools in the Kaybickiy, Apastovskiy and Tetyusheskiy municipal districts in the Republic of Tatarstan).

This study was undertaken in three stages. The first stage was the philosophical, pedagogical, and psychological literature review. The team also analyzed the work of novice teachers and the supervisors responsible for the novice teachers' adaptation. A plan for the empirical work was developed. The hypothesis was tested in the second stage. The study involved 127 novice teachers, 16 head teachers, 34 deputy head teachers and 48 mentors. The conditions contributing to the effective professional adaptation of novice teachers were analyzed and the nature of professional adaptation of teachers was identified. The third stage focused on the study of the conditions that we perceived as contributing to successful adaptation. This chapter analyzes and discusses the research findings and then generalizes the results.

## **RESULTS**

The literature shows that scholars have not yet agreed on a unified definition of adaptation, or its types, content, and interlinkages. The notion of professional adaptation of teachers has received increased attention



across a number of disciplines in recent years and is now regarded as a separate stage of continuing professional and personal development. The author considers professional adaptation as a process contributing to achieving a balance between a set of requirements for teachers and the implementation of these requirements in a particular educational establishment. This presupposes professional socialization of personality, driven by a need for personal fulfilment and self-education. Professional self-education is seen as a nexus between the education obtained at the university and the subsequent enhancement of professional skills and psychological, pedagogical, methodological, and subject specific knowledge. Professional self-education also requires consolidation of pedagogical knowledge and experience through targeted and systematic independent work.

To establish the essence of professional adaptation for novice teachers at the beginning of their career we needed to identify the factors with substantial influence on this process. The results show these key factors include

- the composition of teaching staff,
- the organization and content of work,
- motivation and attitudes towards the teaching profession,
- the work of the department responsible for the development of teaching methods.

From the results obtained from surveys, observations, and interviews with teachers, we identified four groups of novice teachers - a 'successful' group, a 'manipulative' group, a 'problematic' group, and a 'crisis' group. These were based on four criteria - their future and present attitudes towards the teaching profession, their professional future plans, their level of satisfaction with organization and the content of their work. Our view was that professional future plans were the most important factor. The 'successful' group comprises novice teachers with a strong interest in the teaching profession and positive attitudes towards it. They also have a clear focus on teaching and plan to continue their professional career.

Individuals in the ‘manipulative’ group include novice teachers whose choice of teaching profession was influenced by external factors with the result that they cannot adequately evaluate their pedagogical abilities. These teachers are aware of the importance of teaching profession, but do not see themselves as a part of school community. Teachers in this group adapt slowly to school settings and question whether they can realize their potential.

The ‘problematic’ group is a reserved group, consisting of teachers who have doubts about their choice, or are indifferent to teaching profession. Their career plans are unstable, they do not participate in school decision-making, and their role is limited to teaching the subjects in which they qualified.

The ‘crisis’ group consists of novice teachers who have negative attitudes towards teaching and wish to change their job. They explore alternative careers (software engineer, interpreter, manager, etc.), avoid contact with colleagues, parents, pupils, and therefore demonstrate low job performance.

The distinction between these groups enabled us to establish the scope of work on the development of pedagogical excellence and personal characteristics of novice teachers, to influence their successful professional adaptation.

The purpose of the experiment was to develop and implement coordinated pedagogical conditions, based on a person-oriented approach to ensure that novice teachers develop and reveal their creative individuality.

We believe that the social and psychological climate of an educational institution is determined by pedagogical conditions. These are a combination of psychological factors that encourage or impede joint professional activities, and depend on relationships among teaching staff as they develop a sense of belonging. Interpersonal relationships in the workplace define whether novice teachers will inevitably face many difficulties alone or receive substantial support from their colleagues.

A study of types of interpersonal relationships with colleagues and management, as well as types of support for novice teachers enabled us to

distinguish three groups of teaching staff. The first group of teaching staff is characterized by creative activities, collaboration, a passion for teaching profession, and mutual understanding. These groups made up 24.7% of our sample, with 17.6% of novice teachers working in them. The second type of groups of teaching staff (45.7%) is marked by stable relationships between group members. Successes and failures are inevitable in this group, but assistance to novice teachers is provided when needed or in case of conflict. This group included 54.3% of the novice teachers in the sample. The third type of groups of teaching staff (31.4%), with indifferent interpersonal relationships among group members, included 27.8% of novice teachers.

Considerable attention was paid to the organization and content of work of novice teachers, their professional and psychological activities, the evaluation of their work satisfaction, and the identification of factors hindering the adaptation process. Individual induction programs for novice teachers were developed on the basis of this analysis,

Schools, which participated in the educational experiment, provided teachers with healthy social climate characterized by a creative environment and mutual support. By 2017 the relative sizes of the three groups had changed. The numbers in the first and the second type of groups of teaching staff increased by 7.8% and 9.4% respectively and the numbers in the third group accordingly diminished.

At the end of the experiment 71.4% of novice teachers wished to continue working in their groups (three years previously the proportion was 41.7%), demonstrating that the work aimed at improving the social climate in schools contributed to better professional adaptation of novice teachers.

The experimental results showed that a significant number of novice teachers in Russia (78.4%) need mentors. We identified a strong correlation between successful professional adaptation of novice teachers and their relationships with mentors.

The analysis of the results implies that the experiment was successful with an increasing number of novice teachers receiving substantial support in all aspects of their career development.

We organized workshops for novice teachers to introduce them to innovative technologies, help them master skills in IT and its application in teaching, familiarize them with software and the ways of obtaining and processing information.

The novice teachers were provided with an environment for personal fulfilment and creative work in the ‘successful’ group. In working with members of the ‘manipulative’ group, major attention was paid to the cultivation of positive attitudes towards the teaching profession and their personal enrichment. Psychological background is important in the work with those in the ‘crisis’ and ‘problematic’ groups, as they need to overcome negative attitudes towards the teaching profession. It is crucial to provide them with competent mentors and help them to overcome their difficulties.

Overall, there were positive changes in the composition of groups of novice teachers.

## **DISCUSSION**

The first years for novice teachers play a significant role in their professional and personal life. Personal development and self-evaluation determine their success. The routes towards self-improvement and self-identification may vary from one person to another. Work with children and relationships among teaching staff create the environment for the development of teachers’ personality.

Experience shows that schools with a significant number of novice teachers adjust quickly to new technologies and have a higher teaching quality and a higher status (Sinclair & Aho, 2018).

The present research does not fully cover all the issues related to professional adaptation of novice teachers. Further studies should investigate technologies for self-actualization, personal characteristics of novice teachers, characteristics of teaching staff at different schools (eg, selective schools, schools with a specific subject specialization) and their influence on the adaptation of novice teachers.

## CONCLUSION

There is a theoretical justification for the view that the professional adaptation of novice teachers is a process contributing to achieving a balance between a set of requirements for teachers and the implementation of these requirements in an establishment. This presupposes professional socialization of personality, driven by a need for personal fulfilment and self-education.

Professional socialization is an integral and essential part of professional adaptation occurring in a 'social space' and is seen as a process of integrating individuals into a professional work environment. During this process, individuals also embrace standards and values developed by the community of professionals, gain experience, and apply their knowledge and skills in practice. The behavioral pattern, which teachers choose during their integration into the professional work environment, is seen as the optimal behavioral solution.

The research showed that the implementation of a learner-centered approach to novice teachers contributes to better adaptation through cooperation and collaboration. Personality traits, values, motives, and the level of training play an important role in work of novice teachers.

It tested forms and methods of work, presupposing that beginning teachers master their pedagogical skills and have necessary conditions for their personal fulfilment and self-education. And it demonstrated positive changes in the attitudes of novice teachers towards teaching profession and teamwork.

In conclusion, it is crucial to highlight the prerequisites for successful adaptation of novice teachers:

- development of mentoring tools;
- provision of professional development through cooperation and collaboration with other teachers which contributes to their success in the first years of work;
- encouraging novice teachers to participate in competitions that provide reward results;

- promoting self-education and career development by creating conditions for improving the financial status of novice teachers;
- promoting access to higher education (Master's and PhD programs) for novice teachers, so as to develop expertise and improve the quality of teaching.

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*Chapter 16*

**THE TEACHER'S ROLE IN THE STUDENT'S  
ADAPTATION PROCESS WITH CHANGING  
SCHOOL ENVIRONMENTS**

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**ABSTRACT**

The problem of protecting children's mental health is becoming increasingly evident. Neuropsychiatric and functional disorders are more prevalent among children, requiring extensive preventive measures in the educational system. The school environment, which is qualitatively different from the previous institutions of socialization - family, preschool institutions - and which combines mental, emotional and physical stress, places new and more complex demands on the child. These are not only on the child's psycho-physiological state and

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intellectual abilities, but also on their whole personality, and above all on their psychophysical level, as well as on the teacher's personality. The research studied the role of a teacher in the adaptation of a teenage student (a 13-year old boy) who moved from one school to another. It was based on observations and monitoring of emotional, mental and sleep states, pulse rates and temperature. The conditions for successful adaptation of this pupil during the transition from one school to another were developed and substantiated and technologies to create psychologically comfortable conditions for personal development were developed and tested. The teacher controlling the adaptation process underwent vocational-pedagogical training and the effectiveness and necessity of pedagogical support when moving from one school to another was demonstrated. The results will be useful for novice teachers and people involved in educational activities.

**Keywords:** teacher, stress, student's personality, adaptation, maladaptation

## INTRODUCTION

### 1.1. Identifying the Problem

Modern reforms in Russia have affected all aspects of society, including the system of vocational education. Along with positive changes in education, there have been some destructive phenomena. These include a formal attitude of teachers to their duties, a low professional status, subject-object relationships with students, a focus on good results or "indicators", and a priority on training while diminishing the importance of education in developing students' personality (Kosenko 2017). Teacher training involves not only mastering the methodology of the subject to be taught, but also an ability to provide students with individual and differentiated approaches. The role of a teacher as an educator and tutor is currently increasing, and mastering pedagogical support methods is very important for a novice teacher.

Pedagogical support methods and the teacher's role are important in the "adaptation process" of teenage students when moving from one school to another. Adaptation (in a broad sense) is adjusting to environmental conditions. Human adaptation has two aspects, biological and



psychological. The psychological aspect is the adjustment of an individual to their existence in society to meet the requirements of that society and his/her own requirements, motives and interests. It happens through assimilating the norms and values of that society and can be observed through the interaction (including communication) and activity of a person with others. Socio-psychological adaptation is a complex system of measures aimed at mastering new social forms of activity, which is primarily associated with changes in the individual's status. Over the course of their life, a person changes many times, entering certain micro-social conditions (school, work, family, etc.) and each time he or she needs to develop new forms of behavior for these conditions. The influence of environmental factors on the organism, and new relationships initially change the person's mental state. This results in the restructuring of neuro-visceral and endocrine-metabolic connections, which often gives rise to the formation of deviations in neuro-mental health. Socio-psychological adaptation does not eliminate biological and physiological forms of adaptation, but modifies and mediates them, including regulating and modifying an inner element.

## **1.2. Purpose and Objectives of the Study**

The study examined a teacher's role in the student's adaptation while moving from one school to another. Moving to a new school creates significant emotional stress for a child. It inevitably causes a number of problems in encountering a new group of children and adults, new requirements from teachers, a different school discipline, and new educational responsibilities.

## **1.3. Literature Review**

By "pedagogical support", Gazman (1996) understood "the process of determining together with a child, his or her own interests, goals and ways

of overcoming obstacles (problems) that prevent him or her from preserving human dignity, independently achieving the desired results in learning, self-education, communication and lifestyle.” There are different approaches to the analysis of this concept. Deepening the content of the pedagogical support concept, many scholars directly associate pedagogical support with the concept of pedagogical assistance.

By pedagogical support, they understand “the activity of professional teachers in rendering preventive and operational assistance to children in solving their individual problems related to physical and mental health, to communication, to life and professional self-determination”. Here, Bederkhanova (2011) believes that the essence of “pedagogical support” is broader than working with the “human problem” and narrower than the principle. Drawing attention to the specificity of pedagogical support, she gives her own definition: “pedagogical support is a complex, high-tech, special pedagogical (but psychological-intensive) activity based on a certain paradigm. This is a technology of deep meanings, designed to deepen the humanistic content and individualization of the modern education methods.” According to Anokhina (2000) “pedagogical support is a system of means that provide children with help in their own individual choice — moral, civil, professional, existential self-determination, in overcoming the problems of self-realization in school, communication, work, and creative activity”. Anokhina emphasizes that “it is possible to render help only to what is already available (albeit at an insufficient level). That is, it supports self-movement, the development of the self, and the person’s independence.

Hence there is an inherent pathos of the direction of support and the ways of implementing it - the child’s self-development.” Sedova (2006, 43-48) considers pedagogical support as “a special position of a teacher hidden from the pupils’ eyes, based on close interconnected and complementary activity communication, the characteristic features of which are: dialogue in the relationship between students and the teacher; activity-creative nature of interaction; a focus on supporting individual personality development; and providing the person with the necessary

space for making independent decisions, creative choice of content and ways of learning and behavior”.

#### **1.4. Stress as a Non-Specific Response of Human Body to Injury**

The study examined medical and psychological literature concerning the effects of stress on a student's personality. Stress is a response of the human body to overstrain, negative emotions or simply to monotonous daily routine. There are several types of stress:

- Eustress, a beneficial stress in which the body adapts easily to a new state under the action of unusual stimuli.
- Distress, in which the body cannot adapt to new conditions as a result of exhaustion of defense mechanisms. In this stress, the human body produces adrenaline, which makes one look for an escape.

The literature survey revealed that any extraordinary stimuli that threaten homeostasis can cause these two types of reactions in humans and animals. The stimuli could be mental, social, pain, heavy physical exertion, high and low temperature, or “everything pleasant and unpleasant” which accelerates the pace of life.

The first stage of the adaptation syndrome is an anxiety reaction, in which a large amount of adrenaline, norepinephrine enters the blood with the increase of secretion of glucocorticoids, ensuring the formation of glucose from glycogen, and gluconeogenesis to provide energy activity of the heart and brain.

The second stage, that of resistance, is characterized by increased resistance to the action of extreme stimuli because of a persistent increase in the functions of the pituitary-adrenal system.

The final stage is exhaustion, characterized by the extinction of adaptation mechanisms, including the pituitary-adrenal system, with a possible fatal outcome.

**Table 1. Stress consequences**

Subjective	Feeling anxiety and guilt Susceptibility to fatigue
Behavioral	Aggression Unsociable demeanor Incident hazard
Physiological	High blood pressure Peptic ulcer
Cognitive	Absent-mindedness Ineffective solutions
Organizational	Low academic performance

Adaptation diseases result from imperfections of the mechanisms of the general adaptation syndrome (with excessive or insufficient secretion of adaptive hormones).

When a student changes schools, it is stressful for them. The consequences of such stress are shown in Table 1.

## METHODS

This study used an unconventional version of the situational anxiety and personal anxiety scale known in clinical psychology as the Spielberger scale (1927). This was adapted for our purposes. After the first half of the year, a thirteen-year-old teenager was moved to another school with advanced English learning. He was an excellent student in his previous school, but in the new school, a form teacher reacted indifferently to this new student and paid no attention to him in the first month at school. The boy did not feel support from either his classmates or the form teacher. During the first week, he received five low marks, although he was preparing for classes daily and conscientiously. He did not know the requirements of subject teachers in the new school. He was in a stressful state and was in despair. His emotional state was on the edge. He did not feel well, he had sleep disorders (he could not fall asleep), a loss of

appetite, his sense of time was disturbed and he sat preparing for lessons for 10 hours a day.

**Table 2. Self-assessment scale**

No.	How I feel at the moment	No, it's not true at all	Perhaps it's true	It's true	It's absolutely true
1	I'm calm	1	2	3	4
2	Nothing threatens me	1	2	3	4
3	I am stressed	1	2	3	4
4	I feel sorry	1	2	3	4
5	I feel free	1	2	3	4
6	I'm sad	1	2	3	4
7	I worry about possible failures	1	2	3	4
8	I feel rested	1	2	3	4
9	I'm anxious	1	2	3	4
10	I have a sense of inner satisfaction	1	2	3	4
11	I am confident	1	2	3	4
12	I'm nervous	1	2	3	4
14	I am ill at ease	1	2	3	4
15	I am wrought-up	1	2	3	4
16	I am not stiff or strained	1	2	3	4
17	I am glad	1	2	3	4
18	I am worried	1	2	3	4
19	I'm too excited and I feel uneasy	1	2	3	4
20	I am happy	1	2	3	4
21	I am pleased	1	2	3	4

Scoring: Up to 30 points - low anxiety;  
 31-45 points - average anxiety;  
 46 points or more - high anxiety.

His pulse rate increased and his blood pressure was high. He became nervous, aggressive and exhibited antisocial demeanor. In the classroom, he did not communicate with anyone.

After a conversation with the form teacher and other subject teachers, the situation began to change for the better. The teachers paid attention to him with an individual approach. The form teacher became more humane in his treatment and began to provide pedagogical support.

To determine the student's anxiety level, the Spielberger (1927) and Khanin (1939) method of determining the anxiety level was used.

During the first month at the new school, the child self-assessed his condition as "high anxiety" and was constantly in a state of tension. A month later, the level of anxiety became moderate and by the end of the academic year, the level of anxiety became low. It took the student six months to adapt to the new school. The tests showed that, compared to the earlier stage, the level of situational anxiety decreased by 20% after the form teacher became involved in individual work and provided the student with pedagogical support.

## **DISCUSSION**

Some research has been devoted to preparing a new type of teacher who is humane, tolerant and implements an individual-oriented approach to pupils. Popov (2003, 48-59) notes changes in the political and social spheres, which led to a critical situation in traditional education, where there is a need to create a massive and accessible "new school." New concepts in psychology, philosophy, sociology and pedagogy form the ideological basis for social and pedagogical transformations. Yachina and Shishova (2017) believe that the main focus in training a twenty-first century teacher is the upbringing of that teacher's spiritual and moral personality. Nasibullov, Khuziakhmetov, Yarullin and Fatkullov (2018) analyze the system of cooperative work between schools and society on the moral education of young people in the Republic of Tatarstan. Khusainova (2015) describes the relationship between the levels of psychological, social and physical health of teachers of different ages and teaching experience. Frolova (2003) considers pedagogical support as a modern educational paradigm. Amonashvili (2012, 80-84) asserts that "A child is

the unity of spiritual and natural forces housed within it, it is a union of the heaven and Earth, soul and body; a child is the manifestation of Cosmos in the Microcosm. Nevertheless, he or she is also a unique particle of the whole, the only one among the unique ones". The law of a teacher is to love a child, understand the child and be filled with optimism towards the child. The teacher's principles center around humanization of the child's environment, respect for their personality and patience in their development process. The teacher is commanded to believe in the infinity of children and in their own pedagogical abilities by virtue of a humane approach to them. Levites (2017, 96-108) believes that one of the modern teacher competencies is a conscious choice and independent construction of humanistic-oriented technologies of training, for the education and development of children and young people. Kurchinka (2017, 332-350) gives advice on how to raise a child with character. Cathcart (2014) draws attention to an individual approach to a gifted child. Lebedeva et al. (1996) draw attention to the need for developmental education while (Asmolov and Soldatova 2006, 319-321) focus on directing joint actions.

## CONCLUSION

The study showed that pedagogical support is a joint process where, working together with a child, it is possible to determine their own interests, goals, opportunities and ways to overcome the obstacles (problems) that prevent them from preserving their human dignity and personal ambitions in learning, self-education, communication, and lifestyle. First, the role of a teacher while the student is adapting to a new environment is to provide them with the maximum pedagogical and psychological support. Second, in order to create a safe and comfortable environment, the educational process should be implemented in accordance with the hygienic principles of educating children and adolescents. This means:

- compliance with academic workload and pedagogical technologies appropriate to the age and gender characteristics of students, as well as to their individual characteristics at all stages of training;
- providing a differentiated, student-centered approach that takes into account the level of their cognitive and functional capabilities and the state of their health;
- compliance with scientifically based hygienic standards (regulations), that form the educational space of school;
- ensuring a comfortable psycho-emotional state of students in the learning process.

This research does not lay claim to be exhaustive, but draws the teacher's attention to a more humane and attentive attitude toward students.

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