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**PRE-SERVICE TEACHERS' PREPAREDNESS FOR INCLUSIVE
EDUCATION**

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Abstract

Previous research has shown a steady rise in the number of children identified as having various developmental and behavioral disorders. This can be accounted for the impact of different factors such as biogenic, sociogenic or psychogenic. It becomes more evident that developmental disorders do not make a child less human, able to socialize, express feelings and empathy. In that regard, a new system of education, known as inclusive education, emerged. An inclusive education environment has a positive impact not only on the development of children with special needs but on their typically developing peers, too. One of the major issues in implementing the system of inclusive education is teacher preparation. Recent studies and praxis have shown that covering topics on inclusive education within the subjects in existing curricula is not sufficient to prepare highly qualified and competent teaching staff able to work in an inclusive education environment. The present study examines the quality of teacher education programs and related educational processes aimed at preparing pre-service teachers to work in an inclusive classroom. The research presented here confirms that in order to be successful in educating teachers able to work in an inclusive education environment it is necessary to learn about special education and psychology together with developmental and behavioral differences of all children. Pre-service teachers should also intern in such educational institutions that have already implemented the system of inclusive education.

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1. Introduction

1.1. State of the art

An increasingly globalized world is faced with sociocultural, moral, energy and financial crises which results in the search of new insights constituting the basis of the welfare of states. In such state of affairs, the system of education aims at developing highly skilled, competitive and creative citizens on the one hand, and tolerant, empathetic, sociable, capable of critical and analytical thinking on the other hand. There is also a particular focus on children with special learning difficulties whose needs should be catered for in a specially designed education environment. Social abilitation has become one of the priorities within all levels of education that is pre-school, general and higher education.

Inclusive education presupposes that children with special educational needs (SEN) study in the same schools as their relatives, neighbors and friends of the same age. Children with SEN have individualized education programs designed to accommodate their needs. Psychological, medical and educational support services are also available. Such system of education creates a social environment that children with SEN are accustomed to as this environment includes their parents, teachers and peers. The main stakeholders of the inclusive education system are children with SEN, their parents, typically developing children and their parents, teachers, representatives of school administrative body and all the others involved.

The main goal of inclusive education is to create such an education environment where people with special needs have a chance to acquire new knowledge and skills required to obtain a desired profession. In order to achieve this goal there is a need to (1) ensure technical aids and assistive equipments in educational institutions; (2) diversify instructional methods and techniques to provide required psychological and educational help; (3) update the assessment techniques; (4) develop the system of tutoring; (5) develop new specially designed courses for teachers that help them to include children with SEN into an educational process as is stated in the Federal State Educational Standards. A number of obstacles are still in the way of implementing inclusive education. These obstacles may be overcome only by decisions made on the governmental level. One of the main problems is seen in that pre-service teachers are not ready to teach children with SEN in terms of their professional competency. The same concerns gifted children who also need an individual approach as their needs are also often not met.

1.2. Importance of examining problems that arise when implementing inclusive education.

A constantly increasing number of children identified as having physical or mental disabilities has become an alarming trend in the 21st century. There are 8 principles of inclusive education:

1. Value of the human person does not depend on their abilities and achievements.
2. Every person is able to feel and think.
3. Every person has the right to communicate with others and to be heard.
4. People need each other.
5. Education can happen only in the context of positive mutual relationships.
6. Everyone is in need of peer support and friendship.
7. Progress and advancement is what students can achieve rather than what they cannot.
8. Diversity enhances all aspects of human life (Kantor & Bordovsky, 2008).

International and Russian experience and practice have emphasized the effectiveness of co-education of children with SEN and typically developing children.

It is necessary and essential to design and develop a comprehensive program for implementing inclusive education in Russia in order to solve current challenges. Further development of inclusive education system is tightly connected with an improvement of the legal framework, financial, logistical and capacity-building support of the whole process. The effectiveness of inclusive education depends on a child's abilities, parents' readiness to help and on a high quality psychological, pedagogical, medical and social support at all the stages of education.

2. Problem Statement

The problem of professional teacher competences development and teacher education in general has been extensively studied by both Russian (Akhmetova, Nigmatov & Chelnokova, 2014; Kantor & Bordovsky, 2008; Yarullin, Nasibullov, Khuziakhmetov & Nasibullova, 2017) and international (Akçamete & Gökbulut, 2017; Molbaek, 2017; Petry, 2018; Rangvid, 2018) scholars.

Dominici (2018) and Yamburg (1997) examined the issues of inclusive education philosophy.

The term 'inclusive education' and its underlying conceptions have been analyzed by international researchers in the field Moriña & Carballo (2017), Pancsofar & Petroff (2016).

Theoretical grounds of inclusive education are identified in the works by the scholars Ainscow & Messiou (2017), Opie (2018), Tange (2016).

Problems of practical implementation of inclusive education are reported by 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 a great scientific interest.

Doctoral theses in the field of teacher education highlight the problems associated with pre-service teachers' professional competency (Khafizullina, 2010), educational settings and environment necessary for teaching children with SEN within the inclusive education practice (Gafari, 2012). The scholars define 'professional competency' as an integral, multi-level, professionally important trait of a person essential for being a teacher. The researchers highlighted the essence and composition of a teacher's professional competency (Ponomareva & Khuziakhmetov, 2017).

3. Research Questions

The analysis of the theoretical background on the one hand, and practical implementation of inclusive education on the other hand, showed that in order to successfully prepare teachers to work efficiently in an inclusive education environment it is essential to organize teacher education in the following way. Curriculum within teacher education programs at university should contain modules on special education and psychology, psychological and physical characteristics of children. In addition, pre-service teachers should go through internships in educational institutions that have implemented the principles of inclusive education. In view of this the main research question is as follows: do special education and psychology courses in addition to a specialized internship contribute to a better preparation of teachers?

4. Purpose of the Study

The current study aims at (1) analyzing existing international and Russian scientific literature on the problem of pre-service teachers' preparedness to work at schools; (2) identify theoretical and conceptual background against which the research on preparedness of pre-service teachers to work in the inclusive education system is conducted; (3) identify the components, measures and degree of pre-service teachers' preparedness to pursue a teaching career in an inclusive education environment considering its structure.

5. Research methods

5.1. Use of theoretical and empirical methods

The hypothesis was tested by a range of supplementary methods:

- theoretical methods: analysis of scientific literature on psychology and teaching in the field of inclusive education; review and evaluation of existing teaching practices in the field of teacher education; analysis and synthesis of educational programs;
- empirical methods: structured observation; pedagogical experiment; survey; examination of the results; statistical analysis of the data gathered during the experiment; interpretation and evaluation of the experimental work and results.

5.2. Stages of the study

The study was conducted in three stages:

The 1st stage (2016) – exploratory and analytical work: examining state-of-the-art of the problem in the scientific literature and practice, identification of contradicting ideas and general approaches to preparing pre-service teachers to work in an inclusive education environment. Research problem, the hypothesis, research aims and tasks were specified based on the existing methodological and theoretical concepts. The nature of the work performed by an educator teaching children with SEN in the inclusive education system is determined. The leading idea of the research is described and justified.

The 2nd stage (2017) – experimental work: performance of the experiment to test the scientific hypothesis.

The 3rd stage (2018) – interpretation of the research results: analysis of the gathered data; synthesis of the research results; generalization of the results and determination of theoretical and practical implications.

5.3. Evaluation criteria

Evaluation of whether pre-service teachers are prepared to fulfill the teaching work in an inclusive education environment is carried out according to the following criteria:

Value and motivational criterion of preparedness assesses (1) understanding of the philosophy of inclusive education, its main routes of development and values that it holds for children with SEN; (2) willingness to study psychophysical aspects of these children's development; (3) motivation to perform certain actions and to achieve results in teaching typically developing children and children with SEN in

one classroom; (4) willingness to create a favorable school climate for children; (5) willingness to update own experience and collaborate with colleagues.

Activity-based criterion of preparedness assesses the ability to (1) choose necessary and available resources to implement inclusive education practices; (2) identify specific learning difficulties and abilities of children with SEN; (3) organize collaborative learning between children with SEN and typically developing children; (4) employ the techniques of building learning groups in an inclusive education environment; (5) organize own work considering the technology of working in a multidisciplinary group of educators.

Reflexive and evaluative criterion of preparedness assesses ability to (1) analyze each child's case of specific learning difficulties and related problems that might emerge in a group of children; (2) evaluate the outcomes and results of work organized in an inclusive education environment; (3) identify effective ways of organizing collaborative work between all the stakeholders in the inclusive education system; (4) work in a multidisciplinary group of educators; (5) assess own professional work, design individual professional learning routes in the inclusive education system.

5.4. Benefits of inclusive education

The main benefit of inclusive education can be viewed in the opportunity to create a flexible educational environment able to cater for the needs of all children considering their individual intellectual, physical and psychological needs.

Inclusion and socialization of children with SEN is extremely important for the society as a whole.

The society finds it crucial to eradicate discrimination and foster tolerant attitudes. All children in inclusive education learn to be kind-hearted, respecting and tolerant. As a result of implementing this system the quality of children's lives, especially of those who belong to minority and socially vulnerable groups, should enhance.

6. Findings

The study was conducted in three stages. The research sample comprised 65 students studying at the last year at the teacher training university. Pre-service teachers studied to become teachers of history, social sciences, mathematics and chemistry.

At the first preliminary stage it was determined that pre-service teachers have not sufficiently developed the competency to solve problems that emerge when they teach in an inclusive environment. The following indicates the extent to which pre-service teachers' professional competence is developed:

- Partially acquired knowledge about inclusive education which results in incomplete understanding of the main principles and nature of inclusion;
- Insufficient knowledge with respect to psychophysical peculiarities of children with SEN and their development;
- Difficulties encountered when deciding upon teaching methods and technologies to use in the work with both typically developing children and their peers with SEN in the same classroom;
- Difficulties encountered during an immediate work at the classroom as it requires to constantly take into consideration specific learning difficulties of children with SEN;

- Scarce practice-oriented skills which are otherwise needed to organize collaborative work between all the stakeholders of inclusive education;

The 2nd stage involved beta-testing of the module-based teacher educational program. Current trends in the system of inclusive education together with the problems identified at the 2nd stage of this research prompted the program content. The main focus was on:

- Exploring the nature of inclusive education;
- Acquiring knowledge on the developmental characteristics of different groups of children with SEN;
- Mastering essential techniques necessary to organize inclusive education within school settings;
- Studying the nature and peculiarities of group interaction in a class with an aim to foster tolerant attitudes in class and school settings;
- Building knowledge and mastering skills necessary to perform professional activities in a multidisciplinary group of educators.

At this stage students were to solve practice-related professional tasks. This kind of activity allowed pre-service teachers to immerse directly into the problem fields, find solutions and ways to address relevant issues and problems. The experiment was carried out at five consistent steps.

The first step involved delving into the areas where pre-service teachers could familiarize themselves with the given problem situations, related conditions, questions and tasks. At this step students could also identify themselves with the main acting figure and attempted to foresee the outcomes.

At the next step, called problem-posing, students were able to spot sources of their difficulties, identify the main problem and decide what kind of knowledge is necessary to solve professional tasks and promote follow-up activities.

The next step was fundamental as it was devoted to goal setting and planning. Pre-service teachers could outline a clear vision of possible preferred outcomes of the problems identified at the previous stage. In addition, students were supposed to set intermediate goals together with the means and paths to achieve them.

The underlying idea of the next, design, step was the assumption that every person has an already developed set of problem-solving models that can be applied to both personal life and professional spheres. Pre-service teachers were expected to employ their own problem-solving models when they tackled relevant professional tasks.

At the reflexive step students performed data analysis, presented the results and indicated the conditions necessary for pre-service teachers to foster values of their professional activity in the inclusive education system.

The social technologies were employed when training pre-service teachers to work in the inclusive education system. The technologies are focus-group activities, context-based teaching, critical thinking skills development, design of individualized special education programs, group work, case-study teaching. The use of these technologies enabled to provide personalized teacher education and foster tolerant and empathetic attitudes to teaching children with SEN in an inclusive education environment.

The technologies directed students to personal growth and development and enabled them to reconsider the values behind teaching typically developing children and children with SEN in an inclusive classroom.

The last stage of the research assessed the results of the initiated teacher training that aimed at preparing pre-service teachers to work in inclusion. The statistical analysis of the results pointed out at the upward trend in the development of pre-service teachers' professional competencies. This trend can be seen in increased motivation, altered values, readiness to perform teaching activities and to analyze own actions in an inclusive education environment.

Table 01. Research results: levels of pre-service teachers' preparedness based on value and motivational, activity-based, reflexive and evaluative criteria to work in the inclusive education system.

Stage	Value and motivational criterion, %			Activity-based criterion, %			Reflexive and evaluative criterion, %		
	high	medium	low	high	medium	low	high	medium	low
Initial	12	80	8	6	71	23	14	52	34
Final	48	52	0	15	76	9	37	57	6

An increase in the value and motivational criterion of pre-service teachers' preparedness to work in inclusive education can be accounted for a clear structure of professional tasks. This structure indicated areas of knowledge and ignorance of pre-service teachers, included problem fields, set action plans to address professional tasks and obtain related outcomes, identified technologies and cases, including video cases that had a certain emotional impact.

Alteration in the level of preparedness with respect to the activity-based criterion can be explained by the fact that knowledge and skills mastered during the teacher training process were used in immediate practice. Students learnt to design adapted education programs, individualized education plans, projects designed to implement inclusive education at schools.

An increase in the level of preparedness with respect to the reflexive and evaluative criterion can be attributed to the fact that when studying special psychology and special education pre-service teachers paid attention to the value of specific knowledge in the field of problem and troubled development and relevant teaching. This result was achieved due to the identification and analysis of the emerging problems in the professional sphere, selection of appropriate means and methods of implementing inclusion in education. Besides, the use of such social technologies as context-based teaching, critical thinking skills development, case-study teaching, focus-group activities made a significant difference.

The evaluation of the experiment results showed that the majority of pre-service teachers who received training:

- know the nature of inclusion, main principles, obstacles and resources of inclusive education; psychological and educational mechanisms and patterns of development of children with SEN;
- can identify education needs of children with SEN, foresee their developmental routes and the main strategic pathways of their education; implement various forms of interaction between typically developing children and children with special needs; use different means of building

the relationship between all those involved in the educational process considering patterns of psychological development and zones of proximal development of children with SEN; design a special education environment that prompts in developing and addressing the needs of both typically developing children and children with SEN; prepare necessary documentation for the board of psychologists, doctors and educators and take part in the work of the board;

- have a command of technical vocabulary, special technologies and methods necessary to implement inclusive education; can design individualized education programs on the basis of humanitarian principles and theoretical knowledge in the field of special psychology and education.

The analysis of the results obtained at the last stage of the experiment showed that pre-service teachers who undertake teacher training in a practice-based environment interact with children with special needs in a more active way, they tend to fulfil their duties more consciously testing new technologies and designing individualized education programs. The results of the study presented evidence in support of the second model of teacher training. In addition, this model enables to form a multidisciplinary team of educators ready to work in the inclusive education system.

7. Conclusion

In general, therefore, it becomes evident that the process of implementing inclusive education is complicated and multi-faceted and affects scientific, methodological and administrative resources. An inclusive education environment is intended to provide an open and accessible space not only for children but for adults, too. Pre-service teachers are prepared to work in the inclusive education system if they: (a) know psychological and educational mechanisms, principles and patterns of teaching children with SEN and are able to consider their age, personal developmental aspects and features in an inclusive education environment; (b) are able to create special educational conditions at school that enable high quality teaching and development of children with SEN and their typically developing peers; (c) are able to organize and manage teaching activities, be an active participant of a multidisciplinary group of educators and collaboratively design individualized education programs for children with special needs; (d) can foresee patterns of change in development of children with special needs taking into consideration relevant intervention programs; (e) can plan an educational process and its content for teaching typically developing children together with children with special needs; (f) have a command of different teaching methods and techniques to be able to interact with all the stakeholders in the inclusive education system; (g) are able to organize collaborative and individual learning of children with different types of special needs; (h) can identify needs and abilities of every child and relevant strategies to work and provide support for every child; (i) are ready to apply recommended assessment and intervention methods and techniques; (j) continue their professional development in the field of inclusive education.

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