Formation of Future Pre-School Teachers’ Readiness to Work in the Conditions of Educational Inclusion

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Inclusive education becomes a social reality and needs to ensure its quality. Preschool age is a sensitive period of the process of personality's socialization and the formation of moral qualities, providing interaction and communication between people pattern, among which are: respect for "otherness", cooperation, support and mutual aid. Training preschool teachers to work in conditions of educational inclusion is an important determinant of the success in educational process in the new environment and socialization of students. Strategic direction in solving this problem is the formation of such an inclusive readiness (Khitryuk, 2013) at the stage of formation of professional thinking and professional competence of a teacher, that is, in a higher education institution. The article analyzes the results of testing of complex pedagogical conditions of the future teachers' readiness to work in the conditions of educational inclusion formation (Khitryuk, 2014; Sharifzyanova, Shtreter & Nauryzbayeva, 2015; Akhmetzhanova, 2014, Nigmatov, 2014, Nigmatullina, 2014), created at the stage of the teaching profession acquisition. The basis of the experimental work were the universities of Belarus (Baranovichi State University, Brest State University named after A.S Pushkin) and Russia (Kazan Federal University), implementing educational programs for future pre-school teachers training. The results of the pilot study confirmed the advanced hypothesis and effectiveness of pedagogical conditions in the formation of the inclusive readiness.

Keywords: inclusive education, children with special educational needs, inclusive readiness of teachers, the competence approach, pedagogical conditions

INTRODUCTION

Actualizing the problem

The development of civil society is inconceivable without an understanding of belonging and involvement of all its members. Such an understanding is not formed suddenly. This is a lengthy process that involves the formation and education of
man, from pre-school age.

Training of preschool education teachers to work in conditions of educational inclusion is extremely acute and relevant to many countries. It is the preschool period which is considered as the primary socialization. A special role in the socialization process, according to researchers (Yanchuk, 2005; Biktagirova, 2011; Sadovaya, Khakhlova & Reznikov, 2015; Mokeyeva, Zakirova & Masalimova, 2015) belongs to education. The quality of socialization process is determined by the degree of coincidence of elements completeness of the social model of educational society and the general social space of the commoness.

The possibility of implementing the socializing function of education as a social institution for all students is revealed only in terms of inclusive education, i.e. in terms of mass education, the guiding principle of which is inclusiveness.

It is not a declaration that becomes apparent, but implementation in practice the principles of humanistic approach, a guide to which is first of all a teacher.

Explore Importance of the Problem

The terms of inclusive educational environment are characterized by poly subjectivity; they change the essence of a professional educator, his function, the requirements for his cognitive, emotional, communicative and methodological training, as well as for his personal qualities and competencies. Thus, a teacher in inclusive education finds himself in the new in all respects social and professional situations, defining the style and features of his professional thinking, opposing segregation and relying on a priori recognition of individual personality of a child and the need to integrate the features of its manifestation in the educational process (Parfilova, Karimova, Kasimova, 2015). The basis of such thinking is inclusive willingness of a teacher, defined as the educational effect, based on a set of competencies, the content of which reflects the intention in the use of educational outcomes (academic, professional, social and personal competencies) in solving practical problems in actual professional conditions (Khitryuk, 2013). Inclusion as a characteristic of professional thinking of a teacher determines the method ("mechanics") of pedagogical problems solutions by taking into account the educational needs of each child, its individual abilities and predictable life prospects. In addition, inclusiveness as a way of professional and pedagogical thinking determines the need to analyze the pedagogical situation from the perspective of each participant in the educational process and making the most effective solution that does not injure any of them.

Status of a problem

Russian and Belarusian pedagogical and psychological science is in the process of theoretical accumulation and understanding of the foreign countries experience (Mattson & Hansen, 2009; Polat (2011); Schmidt & Cagran, 2006), as well as of the first steps of inclusive processes in the national education system implementation experience (Alekhina, Alekseev & Agafonova, 2011; Aybazova, 2014; Nigmatov & Valeeva, 2013). A significant number of papers are devoted to substantive and methodological aspects of training practical teachers in the field of inclusive education (Kim, 2011; Scorgie, 2010; DeBoer, Pijl & Minnaert, 2011, Cagran & Schmidt, 2011). We have carried out the research devoted to the study of methodological approaches in the formation of inclusive competence of teachers (Khafizullina, 2008; Biktagirova & Valeeva, 2013).

The carried out studies are few in number and are more likely to be viewed as pilot ones, while the requirements of the social order to ensure the quality of inclusive education and training of teachers to work effectively in terms of
educational inclusion define the need to explore the best educational conditions for the solution of acute social and scientific problems.

Hypothesis

The analysis of the psychological and pedagogical literature and experience of practical work of teachers in terms of the developed problem showed that at present the issue of determining the optimal conditions for the formation of an inclusive pedagogical willingness of future teachers in a higher education institution remains unstudied. This makes it possible to formulate a hypothesis of problem research: the formation of an inclusive willingness of future pre-school education teachers can be effective at the following pedagogical conditions:

1) scientific and methodological support of the inclusive willingness of the future teachers formation (construction of a competence model of inclusive education teacher in the aspect of structural and functional analysis of professional and pedagogical activities in terms of inclusive educational environment and subject-functional analysis of participants’ position; implementation of competence-based approach in the formation of an inclusive willingness of future teachers; ensuring a positive educational interference in the logic of deductive approach, reflected in defining position, meaningful accentuation of educational material, which determines the ideas, values and principles of inclusive education in educational domains of all the blocks of training specialists curriculum);

2) the creation of a tolerant educational process environment based on the definition of value-meaningful content of education as a component of culture and motivation of future teachers to tolerant behavior through the adoption of tolerance as value and norm of society;

3) implementation of meta-subject competence-contextual technology of the future teachers willingness formation (ensuring systematic and consistent formation of inclusive willingness to creating conditions to achieve the effect of "pedagogical resonance" by variation of organizational forms, technologies and teaching methods, as well as extracurricular activities; substantial contingency of curriculum disciplines in training future teachers, reflecting the meaning and values of inclusive education, personality and teaching tolerance, ensuring implementation of the "axiological consolidation function of education"; the complexity and variety of forms and means of inclusive willingness formation through effective involvement of future teachers in educational activities, adequate to relevant conditions of professional development (Khitryuk, 2014). The complex basis of the pedagogical conditions in the inclusive willingness formation of the future teachers is a complex of organizational, educational, content-pedagogical and process-pedagogical conditions, inter-determining each other.

Starting position in the development of a set of pedagogical conditions for inclusive willingness formation of the future teachers are: the social order to ensure the quality of inclusive education; features of professional-pedagogical activity in terms of inclusive educational environment; unity of substantial lines of the educational standard of higher teaching education and implementation of competence approach to training (Biktagirova, 2011).

MATERIALS AND METHODS

Theoretical and empirical methods

The study of the effectiveness of the proposed pedagogical conditions for inclusive willingness formation of the future preschool education teachers involves the use of the following methods:
• theoretical methods: the structural-functional and subjective-functional analysis of professional and pedagogical activity in the conditions of inclusive education;
• empirical methods: diagnostic quiz (questionnaire, evaluation, testing);
• experimental (stating, forming and control stages);
• mathematical statistics methods of experimental data processing.

Research basis

Screening research database were universities of the Russian Federation (Kazan Federal University, Baltic Federal University by I. Kant, Volgograd State Social Pedagogical University, Smolensk State University) and the Republic of Belarus (Baranovichi State University, Brest State University by A. S. Pushkin, Vitebsk State University by P.M. Mashcherov, Mogilev State University by A.A. Kuleshov, Mozyr State Pedagogical University by I.P. Shemyakin). The study involved 1006 graduate students in "Primary education" and "Pre-school education" specialties.

The basis of the experimental work on complex pedagogical conditions testing were the universities of Belarus (Baranovichi State University, Brest State University by A.S. Pushkin) from September 2012 to January 2015. The study involved only 133 students at the age of 19-22 mastering educational programs of "Preschool education. Additional specialty". The experiments were performed in vivo implementation of the educational process.

Stages of research

Research was conducted in three stages:

The first stage studied the issues of teachers' inclusive readiness as psychopedagogical phenomenon by means of screening and its formation in terms of the higher education, the base of experimental research was defined.

The second stage carried out the pedagogical experiment, pedagogical conditions of formation of the future teachers' inclusive readiness (TIR). Experimental study was carried out in three stages:

stating stage involves determining the initial values of the studied parameters. At this stage we revealed: the overall rate of formation of the future of preschool education teachers' inclusive willingness; rates of formation of each structural component of TIR; the level of TIR formation and the level of each TIR structural component; the segments ratio of the reproductive TIR formation level.

forming stage of the pilot study was aimed at appraisal of complex pedagogical conditions of formation of the future inclusive preschool education teachers' willingness in higher educational establishments;

control stage included the study of the changes dynamics in the values of baseline, quantitative and qualitative analysis of the experimental data to verify the effectiveness of pedagogical experiment on the development of creative abilities of students.

Evaluation criteria

To evaluate the effectiveness of pedagogical conditions of the future preschool teachers' inclusive readiness formation we used quantitative and qualitative factors. Quantitative factors were: 1) the rate of formation of the inclusive readiness as a whole and that of individual structural components; 2) quantitative data distribution in accordance with the selected levels of TIR; 3) quantitative distribution data on reproductive TIR level in accordance with the selected segment.
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 initial, basic, advanced). Qualitative indicators were: quality of the formed competencies; harmony levels of structural components formation of the future preschool education teachers' inclusive willingness; the ratio of the reproductive level formation of TIR segments.

As structural TIR components we defined the following:

Cognitive: the intention of teacher to perceive and understand inclusive education as an attitude object, its conceptual idea, the essence, the factors determining its effectiveness, as well as the knowledge that characterize the cognitive activity and personality of "special" children, understanding of the structure and content of the educational process in terms of inclusive education.

Emotional: the teacher's intention to accept the conditions of inclusive education, special character of education process, of children with special educational needs (including children with special psychophysical needs), and other participants in inclusive educational environment. This component is the basis of the spontaneous formation of unconscious patterns and ways of behavior in professional activities.

Connotative: direct expression of the attitude intentions, the motives of professional conduct in relation to the subjects of inclusive educational environment, willingness to exercise competence.

Reflective: intention to analyze the teaching activities, the objects of which can be: the process of interaction and communication subjects of inclusive educational environment; educational outcomes (educational effects); independent activities and others (Biktagirova & Valeeva, 2014).

Communicative: the intention of a teacher to organize interaction and communication with the participants of inclusive educational environment, to find and use appropriate tools and techniques of communication, to design communication.

At the heart of the TIW are the knowledge, skills, competencies (academic, professional, social and personal), adequate to wish of communicative action or deed. In this case, the academic competence refers to the methodology and terminology of a particular area of knowledge, understanding the systemic relationships in its system, as well as the ability to use them in solving practical problems; a professional competence refers to willingness and ability to act expediently in accordance with the requirements of the actual teaching situation; the social and personal competences refer to a set of competencies related to man himself as an individual, the individual interaction with other people, group and society.

Course and description of the experiment

Inclusive willingness of teachers can be formed at different levels (elementary (intuitive), reproductive (functional) or professional). Criterial characteristics of each level are the completeness, quality and complexity of the competency content (academic, professional, social and personal competences) (Khityuk, 2013).

For the diagnostics of the TIR formation level as a whole and its structural components we used methods of diagnostics and monitoring of TIR (Simaeva & Khityuk, 2013).

The data obtained at the stating stage of the study led to the conclusion:

TIW factor and those of all the structural components of the TIR are of reproductive level of development.

Willingness of the future teachers to work in conditions of inclusive education is formed at the professional level only of 3.16% of the respondents, while 18.95% of respondents show the elementary level inclusive willingness formed, and 77.89%
form the reproductive level. Elementary level of willingness is insufficient for the professional work of a teacher, the reproductive level is presented as a necessary and sufficient minimum, but does not allow teachers to be effective in their professional activities, and professional level provides a sufficient level of competence and freedom of choice of teaching activities technology in terms of inclusive education. Almost one in four of the future teacher forms cognitive, connotative and communicative components at the elementary level.

Table 1. Ranges of TIR levels and structural components factors

<table>
<thead>
<tr>
<th>TIR components</th>
<th>The range of possible values</th>
<th>The formation levels, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The ranges of maximum values</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elementary (intuitive)</td>
<td>Reproductive (functional)</td>
</tr>
<tr>
<td>g(C)</td>
<td>-2,5…+6,5</td>
<td>-2,5…+0,4</td>
</tr>
<tr>
<td>g(E)</td>
<td>-6,0…+3,0</td>
<td>-6,0…-3,1</td>
</tr>
<tr>
<td>g(CC)</td>
<td>-1,5…+7,5</td>
<td>-1,5…+1,4</td>
</tr>
<tr>
<td>g(R)</td>
<td>-2,5…+6,5</td>
<td>-2,5…+0,4</td>
</tr>
<tr>
<td>g(CM)</td>
<td>-1,0…+8,0</td>
<td>-1,0…+1,9</td>
</tr>
<tr>
<td>g (TIW)</td>
<td>-2,5…+6,5</td>
<td>-2,5…+0,4</td>
</tr>
</tbody>
</table>

On average 43.19% of the respondents refer to the initial segment of the reproductive level. Such factors and characteristics of TIR cannot be characterized as reasonable and cannot ensure the effectiveness of the professional work of a teacher in terms of inclusive education.

Formative stage of the research involves the introduction of pedagogical conditions of inclusive willingness formation of future teachers to work in conditions of inclusive education and the experimental determination of the educational process impact. The developed complex of pedagogical conditions was defined by a format of meta-subject pedagogical competence-context technology (MCCT), which included substantive, methodological, didactic design and reconstruction of the entire educational process with extensive use of contextual problem tasks and situations (cases). MCCT is an important part of specially organized and implemented learning activities of students defined by the external context (the conditions of professional and pedagogical activities in inclusive education, poly-subject nature of inclusive education environment). Implementation of MCCT suggests widespread use of contextual problem tasks and situations, the process and outcome and the solution of which is a means of formation of complex academic, professional, social and personal competencies defining TIR (Khitryuk, 2014). Important role belongs to value-meaningful content of the contexts that determine the formation of the future teachers’ inclusive willingness. A special place in the MCCT formation of the future teachers’ inclusive willingness is devoted to the study of “Fundamentals of Inclusive Education” discipline (Simaeva, Khitryuk & Ponomarev, 2013).

RESULTS

Results of the control stage of experimental study

The objectives of control experimental stage of the study were:
- identifying the dynamics of the future pre-school teachers’ inclusive readiness factors and its structural components (Table 2);
- dynamics of the level ratio components of the future pre-school teachers’ inclusive readiness formation (Table 3);
• changes in the ratio of reproductive level segments of the future pre-school teachers’ inclusive readiness formation (Table 4);
• an overall assessment of the complex pedagogical conditions impact of the future pre-school teachers’ inclusive readiness formation

### Table 2. TIR formation factors and its structural components at the stating and control stages of experimental research

<table>
<thead>
<tr>
<th>The stage of experimental research</th>
<th>Factor of TIR components</th>
<th>Common TIW factor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g(S)</td>
<td>g(E)</td>
</tr>
<tr>
<td>Stating (S)</td>
<td>2.5</td>
<td>-0.9</td>
</tr>
<tr>
<td>Control (C’)</td>
<td>4.3</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### Table 3. Levels of structural components formation of the future pre-school teachers’ inclusive readiness in stating and control stages of the study

<table>
<thead>
<tr>
<th>TIR components</th>
<th>Formation levels, %</th>
<th>Elementary (intuitive)</th>
<th>Reproductive (functional)</th>
<th>Professional</th>
<th>Stages of experimental research</th>
<th>χ² observed</th>
<th>χ² critical (p≤0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>C’</td>
<td>C</td>
<td>C’</td>
<td>C</td>
<td>C’</td>
</tr>
<tr>
<td>g(C)</td>
<td></td>
<td>21.80</td>
<td>7.69</td>
<td>75.19</td>
<td>1.50</td>
<td>21.05</td>
<td>269.7595</td>
</tr>
<tr>
<td>g(E)</td>
<td></td>
<td>13.53</td>
<td>2.26</td>
<td>85.71</td>
<td>0.75</td>
<td>21.00</td>
<td>601.3045</td>
</tr>
<tr>
<td>g(CC)</td>
<td></td>
<td>26.32</td>
<td>5.26</td>
<td>72.93</td>
<td>0.75</td>
<td>16.54</td>
<td>349.6641</td>
</tr>
<tr>
<td>g(R)</td>
<td></td>
<td>5.26</td>
<td>2.26</td>
<td>82.71</td>
<td>12.03</td>
<td>25.56</td>
<td>16.92806</td>
</tr>
<tr>
<td>g(CM)</td>
<td></td>
<td>27.82</td>
<td>5.26</td>
<td>71.43</td>
<td>0.75</td>
<td>17.29</td>
<td>383.0567</td>
</tr>
<tr>
<td>g(TIW)</td>
<td></td>
<td>18.95</td>
<td>3.76</td>
<td>77.89</td>
<td>3.16</td>
<td>20.45</td>
<td>106.9351</td>
</tr>
</tbody>
</table>

### Table 4. The segments ratio of reproductive level of the future pre-school teachers’ inclusive readiness in stating and control stages of the study

<table>
<thead>
<tr>
<th>TIR components</th>
<th>n</th>
<th>Total</th>
<th>Elementary</th>
<th>Reproductive (functional)</th>
<th>Professional</th>
<th>Segments</th>
<th>χ² observed</th>
<th>χ² critical (p≤0.01)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Individuals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>156</td>
<td>148</td>
<td>47.50</td>
<td>14.04</td>
<td>32.50</td>
<td>44.73</td>
<td>20.00</td>
<td>41.23</td>
</tr>
<tr>
<td>g(C)</td>
<td>120</td>
<td>114</td>
<td>47.50</td>
<td>14.04</td>
<td>32.50</td>
<td>44.73</td>
<td>20.00</td>
<td>41.23</td>
</tr>
<tr>
<td>g(E)</td>
<td>134</td>
<td>116</td>
<td>42.53</td>
<td>13.79</td>
<td>43.28</td>
<td>52.59</td>
<td>14.18</td>
<td>33.62</td>
</tr>
<tr>
<td>g(CC)</td>
<td>113</td>
<td>117</td>
<td>51.33</td>
<td>19.66</td>
<td>29.20</td>
<td>46.15</td>
<td>19.47</td>
<td>34.19</td>
</tr>
<tr>
<td>g(R)</td>
<td>127</td>
<td>110</td>
<td>22.83</td>
<td>9.09</td>
<td>31.50</td>
<td>40.00</td>
<td>45.67</td>
<td>50.91</td>
</tr>
<tr>
<td>g(CM)</td>
<td>114</td>
<td>113</td>
<td>51.75</td>
<td>15.04</td>
<td>43.86</td>
<td>52.21</td>
<td>43.99</td>
<td>32.74</td>
</tr>
<tr>
<td>g(TIW)</td>
<td>-</td>
<td>-</td>
<td>43.19</td>
<td>14.32</td>
<td>36.07</td>
<td>47.14</td>
<td>20.74</td>
<td>38.54</td>
</tr>
</tbody>
</table>

The data analysis of stating and control stages of experimental research shows the positive dynamics of TIR factors as a whole and for each structural component: a steady increase in performance is fixed (Table 2; Table 3). In addition, we identified positive qualitative changes in the segment ratio of the reproductive level of TIW components formation (tab. 4).

Using the methods of mathematical statistics (Student’s t-test, χ²-test) confirmed the high significance of the difference in data obtained at stating and control stages of the pilot study. Thus, it is evidenced that:

significant differences between the TIR factors at stating and control stages of the experimental research are significant by more than 0.1% level (temp = 35.21, at: tcr = 1.96 (p≤0.05), tcr = 2.58 (p≤0.01), tcr = 3.29 (p≤0.001).
A statistically significant difference of distribution of factors by the level of all the structural TIR components formation at the stating and control stages: $\chi^2g (C) = 269.76; \chi^2g (E) = 601.30; \chi^2g (CC) = 349.66; \chi^2g (R) = 16.93; \chi^2g (CM) = 383.06$ (at $\chi^2kr = 9.21$ for $p \leq 0.01$).

We have defined statistically significant differences in the distribution of the data by the reproductive TIR level segment: $\chi^2g (C) = 50.71; \chi^2g (E) = 48.08; \chi^2g (CC) = 40.51; \chi^2g (R) = 11.16; \chi^2g (CM) = 210.71$ (at $\chi^2kr = 9.21$ for $p \leq 0.01$).

**DISCUSSIONS**

Inclusive willingness of teachers to work in conditions of inclusive education is a prerequisite for the formation of professional competence of a teacher. Competence TIW content allows us to view it from the standpoint of the educational effect, determining the quality of educational outcomes of higher education graduates. Practical implementation of the inclusive education, the creation of "inclusive vertical" in the system of education is extremely relevant to the problem of the future preschool education teachers' inclusive willingness formation at the stage of profession acquisition. The TIW formation is a task-oriented longitudinal process, involving the creation of a complex of pedagogical conditions, organically integrated into the educational process of higher education institutions.

**CONCLUSION**

The theoretical analysis of the problem of training future teachers to work in conditions of inclusive education, the analysis of psychological and pedagogical literature allowed us to determine the basic theoretical position - the laws of formation of readiness (as a social attitude), the frames of the influence of readiness on human behavior, especially professional and pedagogical activity in conditions of inclusive education, the opportunities of competence approach in the formation of inclusive readiness of teachers. These provisions served as the basis for development of pedagogical conditions of formation of future preschool teachers' readiness to work in conditions of inclusive education and to introduce them into the educational process.

The conducted pilot study proved the hypothesis and theoretical positions on the implementation of a set of pedagogical conditions of formation of the inclusive readiness of future preschool teachers. However, the format of the multidimensional nature of the studied problem, its methodological and instrumental complexity require further investigation.

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