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The Influence of Inclusively-oriented Courses on the Level of Formation of Future Teachers' Inclusive Competence in the Process of Training

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Abstract

The relevance of the research problem is determined by the creation of a single educational space based on the ideas of inclusion in Russia. The urgent problem is the continuous analysis of the architecture of the main professional educational programme based on the timely monitoring of the results of mastering the program by students. Astrakhan State University has accumulated sufficient experience for generalization and dissemination. The goal is to identify the impact of inclusively-oriented courses on the level of formation of future teachers' inclusive competence.

The methods utilized are observation, interview, questionnaire, methodology for studying the motivation of professional activity, methods for diagnosing pedagogical tolerance, pedagogical experiment, quantitative and qualitative analysis of the results. The hypothesis is the formation of inclusive competency will be more effective when students study the "Inclusive teacher competency" course.

The empirical study was carried out in 2015-2020 at Astrakhan State University on the number of compulsory disciplines and the elective course called "Teacher's inclusive competency."

During the period of work on constructing meaningful and technological support for preparing future teachers for professional activities in the context of inclusion, 9478 students of all faculties were covered.

It was revealed that the students of the experimental group showed a higher level of inclusive competency development. The obtained results became the basis for adjusting the main professional educational programme: an elective discipline was included in the compulsory block.

The results suggest that the level of formation of future teachers' inclusive competence is affected by the potential of all the pedagogical disciplines and the adding of inclusively-oriented courses in the educational content. It is proved that monitoring the results of the development of the programme, the analysis of the architecture of the main professional educational programme and its timely correction contribute to more effective preparation of students for the implementation of inclusion.

Keywords: inclusion, inclusive competence, inclusively-oriented course, the level of inclusive competence formation.

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Introduction

Inclusive education in general educational contexts has been a global movement for at least 30 years. Since ratifying the UN Convention on the Rights of Persons with Disabilities (2007) by more than 175 countries in 2006, inclusive education has become global.

However, without an appropriate teacher training in a Russian higher school, the formation of an inclusive education space that includes all stages of the continuous process will be impossible. As Khafizullina (2008) noted, “the main contradiction at this stage is educational practice need in qualified specialists with a high level of inclusive competency and the traditional content of teacher’s professional training” (p. 4).

A modern understanding of this problem involves the formation of an internal university integrative model for the implementation of inclusive competence. The professional standard of a teacher in the Russian Federation establishes the requirements for the level of teachers’ education, qualifications and experience. This is also confirmed by the modern requirements for the results of the main professional educational programme development.

Purpose and objectives of the study

The purpose of the study is to identify the impact of inclusively-oriented courses on the level of formation of future teachers’ inclusive competence.

Literature review

Modern pedagogy reveals the concept of professional competence as an integrated multi-level professionally significant characteristic of a teacher’s personality and activity. A model of the formation of future teachers’ inclusive competence in the process of professional training has been developed by Khafizullina (2008), who understands future teachers’ inclusive competence as a component of their professional competence. Alekhina (2015) defines the professionalism of a teacher in an inclusive class as a resistant and purposeful change in teacher’s value attitudes to include an atypical child in children's team.

The existence of a theoretical justification for the transition to coeducation developed at the turn of the 20th and 21st centuries and the creation of an appropriate regulatory framework did not become the basis for the widespread inclusion. A systematic analysis of the articles in peer-reviewed journals in English and Spanish on the practice of inclusive education from 2002 to 2016 (Amor et al., 2019), the most quoted journal articles of North America and Europe (Nilholm & Göransson, 2017) and also the scientific literature on inclusive education since the Salamanca statement with use of the metadata taken from 7084 publications for the last 25 years (Hernández-Torrano et al., 2020), revealed the gap

between position articles with the developed discussions and case studies. The insufficient number of empirical articles with conclusions about the efficiency of inclusive technologies is noted. It is claimed that conceptual confusion, the lack of consensus concerning methodology definition interfere with the development of the inclusive process (Nilholm & Göransson, 2017). Various aspects of the problem of preparing teachers for work in an inclusive education are developed by domestic and foreign researchers.

Not without scientific interest is a new conceptual basis of a comprehensive analysis of inclusive educational systems and its visual presentation using the CESA Cube (CESA³) (Krischler et al., 2019).

The significance of the value aspect in the structure of the teacher's inclusive readiness is proved based on the structural-level analysis (Biktagirova & Khitryuk, 2016). The study of Kazakhstani scientists who note a mismatch in the content of working curricula and insufficient number of credits for preparing teachers for work in an inclusive educational environment is also advantageous (Shkutina et al., 2017).

Most researchers note that teachers need inclusively oriented training, as basic teacher education "did little or nothing to help them develop their knowledge of the types of inclusion" (Attwood et al., 2019).

It is important for people who come from other pedagogical traditions to understand the problem of inclusive education, refocusing the discussions from technical issues about effective education, or competitive questions about excellent education to the problem of education quality (Schuelka & Thyrring Engsig, 2020).

The author structure of the teacher's readiness for the development and implementation of inclusive education for children with disabilities with an assessment of the level of formation of an inclusive culture in educational institutions depending on the role of the participant in the educational process: a teacher, parent, student is proposed (Perschina et al., 2018). It is proposed to consider the formation of methodological and inclusive competency as the goal of professional development of vocational education teachers (Krasnopevtseva, 2018). It is noted that the most problematic for teachers in the structure of psychological readiness for inclusive education at the moment is the border level of pedagogical tolerance (Samsonova & Melnikova, 2016), the insufficient cognitive component of teacher's preparedness, the high level of difficulty in planning their work in accordance with the new federal state educational standards of higher education (Adeeva, 2016). The logic of the study of master training of students with options for design and research tasks (Alekhina, 2015) is described, the main strategy for training specialists in master programs working in inclusive educational organizations is the formation of professional competencies at the training sites of network educational organizations (Zakharova & Staroverova, 2016).

The reforms and initiatives aimed at enhancing the results of inclusive education require a broader analysis of the changing nature and complex social, cultural, historical, political and institutional conditions in which students are located (Leechin et al., 2019).

Despite the availability of scientific papers on the formation of teachers' inclusive competence, few researchers study the issues related to the specifics of building future teachers' educational process at university.

The conceptual basis for the selection of methods and techniques was a modified model of inclusive competence as an integrative personality education proposed by Khafizullina (2008). The model includes a set of interconnected components: Motivational - Cognitive - Operational - Reflective. The study monitored the changes in all the components.

The hypothesis of the study was based on the assumption that the process of forming inclusive competence will be successful when future teachers study the "Inclusive teacher competency" course.

Methodology

The empirical study was carried out in the process of organizing the educational process in 2015-2020 at the Astrakhan State University in the block of disciplines that ensure the formation of future teachers' inclusive competence: the required basic course - "Pedagogy", the variable part - "Psychological and Pedagogical Practicum", "The Basics of Special Pedagogy", "The Basics of Special Pedagogy and Psychology", the elective part - "Inclusive teacher competency."

In total, over the period of work on building not only the substantive but also the technological side of preparing future teachers for a new field of professional activity, 9478 students were covered.

Tasks

1. To identify the level of inclusive competence formation.
2. To develop an inclusively-oriented course containing technologies for preparing future teachers for work in an inclusive education environment.
3. To implement the developed program, to conduct diagnostic procedures.
4. To analyze and interpret the results of the empirical study.

The study used the following diagnostic tools:

- The following methods and techniques were selected for conducting the empirical study: included observation, interviewing, studying educational and methodological documentation, solving professional problems, expert evaluation of diagnostic products (questionnaires; testing); pedagogical experiment, quantitative and qualitative analysis of the results, methods of graphic representation of the results. The selection of diagnostic methods determined the current state of future teachers' inclusive readiness (both individually and in the sample of respondents: a sample of students of future teachers according to specialties and courses) and monitoring its formation.
- The motivational component of inclusive competency - the methodology for studying the motivation of professional activity by Zamfir in Reana's modification (cited in Bordovskaya & Rean, 2003)
- The cognitive component was detected by the author complexes of test tasks. The tasks for diagnosing special skills were included: operating concepts and facts, choosing a method or technique.

- Operational - expert evaluation of activity products, essays.
- Reflective - a modified methodology for the diagnosis of pedagogical tolerance by Makarov (2011).

Experiment description and procedure

At the preparatory stage (2015–2017), all the disciplines of the pedagogical cycle in the substantive part were subordinated to the logic of the development of the future teacher' inclusive consciousness. The main university concept was the creation of a single university space with common information and educational resources. Network University provided students with access to all the educational resources, as well as educational services.

The theoretical block and fund of assessment tools for pedagogical disciplines included texts of a problematic nature, cases, pedagogical tasks that form students' inclusive consciousness. The first sections of knowledge demonstrated positive progress in the development of inclusive attitudes.

The pedagogical experiment took place in parallel with the active work on updating the main educational programs in the field of training.

The pedagogical experiment (2017–2019) was carried out in three stages: ascertaining, formative, control.

1) In the context of the ascertaining stages investigation phase the analysis of the level of inclusive competence formation according to the described criteria was carried out.

The following components acted as the criteria of formation of future teachers' inclusive competence:

1. Motivational – motives, intentions, values, plans, interest in pedagogical activity in the conditions of inclusive education, the aspiration to achieve success.
2. Cognitive – understanding of inclusive education as an object of an attitude, knowledge characterizing cognitive activity of "special" children, the idea of the organization and content of educational process in the conditions of inclusive education, understanding of professional tasks, the means of goal achievement.
3. Operational – the mastered ways and experience of the solution of specific professional objectives in the inclusive training course. The ability to implement various ways of pedagogical interaction between all the subjects of the educational environment.
4. Reflexive – the analysis of the efficiency of their own activity and also children's activity and interaction in inclusive educational space.

Taking into account the marked-out criteria, three levels of formation of future teachers' inclusive competence were determined: basic, average, high.

Basic - consideration of training in a special (correctional) educational institution or individually at home as an acceptable way to get education for people with disabilities. The unstable nature of the desire to replenish the missing

knowledge and skills of implementing inclusive education. The ways to solve professional problems in the process of inclusive education are not mastered.

Average – understanding of inclusive education as the most optimum for socialization of children with disabilities. Insufficiently systematized knowledge of the specifics of work with various categories of children in the conditions of inclusive training. Conscious aspiration to replenish the missing knowledge of inclusive training realization. Difficulties to solve the pedagogical tasks modeling professional activity in inclusive training conditions.

High - awareness of the inclusion significance. Deep and systematic knowledge of the specifics of work in an inclusive learning environment. Able to analyze and evaluate the experience of professional activities in the inclusive learning process. Sustainable need to enhance their inclusive competence. The methods and experience of performing specific professional actions in the process of inclusive learning are worked out in the course of teaching practice.

2) The formative stage. Experimental and control groups were identified. The sample size was 1860 students, of which 967 students did not choose the "Inclusive teacher competency" elective discipline (control group - CG) and 893 students who studied the developed course (experimental group - EG). The sample was made up of second and third year students studying "Pedagogical Education" (undergraduate level).

The group samples were homogeneous, representative (age, academic and practical experience), proportional and frequency based on the characteristics of the general population, repeated (respondents participated in the measurement procedures several times using the same diagnostic tools). The characteristics of the sample allowed to extend the results of the study to the general population.

The program of the "Inclusive Teacher Competency" course was developed, designed for 108 hours. The approbation of the course was built into the structure of the curriculum.

The purpose of the course is to form inclusive pedagogical thinking, psychological and pedagogical (inclusive) and social readiness to work with children with special educational needs (including students with special psychophysical development) in the context of inclusive education, inclusive readiness of students to implement norms, principles and functions in modern inclusive education.

Course Objectives:

1. To give the idea of inclusive education as an important sociocultural phenomenon of modern civilization.
2. To increase the level of positive inclusive attitudes.
3. To develop the ability to design an inclusive environment for co-education of children.
4. To promote professional self-education, the development of the ability to identify and analyze the problems of organizing inclusive practices.

The content of the course modules was determined by a set of indicators of the teacher's inclusive competence: laws and patterns of child development at all the stages of its ontogenesis; individual socio-psychological characteristics of the

development of special children in each category of atypicality; regulatory, informational and personnel support of an inclusive educational environment; models of a teacher, tutor, psychologist in inclusive education; material, technical, organizational and pedagogical, socio-psychological characteristics of training and education in an inclusive school; psychological and pedagogical support of students with special health abilities in an inclusive educational environment; technology activities of the school psychological, medical and pedagogical consultation, the development of an individual educational program; individual support of children with disabilities; creation of the tolerant educational environment of an inclusive class; psychology and pedagogical support of students' parents in the inclusive educational environment; diagnostics of the inclusive educational environment and its subjects; problematic issues of development of inclusive space in Russia and in the world. The level characteristics of assimilation of contents were developed for each of the modules.

The organization of classes on the developed course was carried out during the school year. The conditions were created for the reorientation from listening to educational information to the active solution of professional tasks.

During the study of the entire course, the following interactive technologies and methods were used: designing an individual educational route, brainstorming, discussion, focus group research, case study to detect discriminatory manifestations in relation to "special" children, situational role-playing games to create situations of variably professional behavior.

The leading role was played by the technology of solving contextual problem tasks and situations, for example, to develop the ability to resist the manifestations of negative social stereotypes. Activating techniques were used: "provocation" (using obviously wrong options in the task), "demand for proof", "doubt".

The following specific methods and techniques for the development of a reflective component were used: reflective assessment, ranking, maintaining a reflective diary, modeling a situation, a group discussion of the identified problem and finding its solution, preparing a step-by-step plan. The involvement of students in emotional situations of communication was provided by watching documentaries and feature films: "In aut" (Olga Arlauskas, Nikita Tikhonov-Rau, Russia, 2012), "Anton's Right Here" (Lyubov Arkus, Russia, 2012), "The Miracle Worker" (Arthur Penn, US, 1962), Imagine (Andrzej Jakimowski, Poland, 2012) and others.

The research tasks were aimed at developing the cognitive component of inclusive competence. The elementary phrases of Braille's sign language were mastered. In this case, personal characteristics in subject-subject interaction, positioning of tolerant relations were taken into account.

The operational component was most productively formed in the course of production practice in inclusive children's groups. The analysis of methods and techniques of the teacher's work in the context of educational inclusion was carried out, plans for parenting were drawn up, the formation of an inclusive team was diagnosed, a program for inclusion of special children in the educational process of the classroom was developed. Workshops and practical courses were organized.

3) The control stage, covering the academic year, involved the implementation of the developed course and the implementation of diagnostic procedures. The third stage included the analysis of the empirical study results.

Results

The ascertaining stage included the procedure of input diagnostics of the level of formation of inclusive competency in students of the EG and the CG based on the selected criteria.

The diagnostics revealed the prevalence of external positive motivation in both groups: EG - 65.28% (583 people), CG - 63.39% (613 people). Internal positive motivation: EG 31.57% (282 people) - and CG - 32.16% (311 people). Motives for avoiding negative consequences were found in 3.13% (28 people) - students in the EG, 4.44% (43 people) - students in the CG. They did not realize the value significance of each child, including a student with disabilities.

A qualitative analysis of the state of the cognitive component of inclusive competence demonstrated that most students lacked theoretical training. Most students of the two groups had superficial ideas about the psychomotor development of different categories of children with disabilities, had general ideas about the features of teaching children with impaired psychophysical development, the ideas about the organization and content of the educational process in inclusive education, the understanding of professional functions and tasks, the assessment of their significance, the knowledge of the means to achieve a goal (Figure 1).

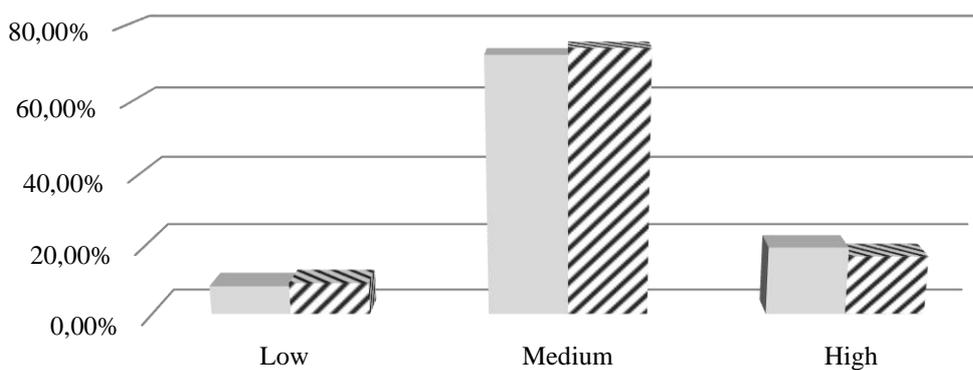


Figure 1. The results of the input diagnostics of the level of cognitive component development of the of EG and CG inclusive competence

The examination of activity products, analysis of “A Modern Teacher in an Inclusive School” essay in the process of researching the operational component revealed that the low level in the EG was 90.93% (812 people) and 88% (851 people) in the CG of the subjects, the average level is 9.07% (81 people) in the EG, and 12% (116 people) in the CG, no one showed a high level.

The reflexive component was diagnosed by Yu.A. Makarov's technique (2011). It was offered to respondents to choose from the set formulations only those which reflect the relation to a profession. It is revealed that 56.21% (502 people) in EG and 59.04% (571 people) in CG have low level that was shown in imperativeness of the chosen answers, hostility and dispassionateness in relation to children with disabilities. The average level was shown by 43.78% (391 people) of EG and 40.95% (396 people) in CG. The high level was not recorded.

The results of the generalized input diagnostic data indicate that the indicators of the formation of both the inclusive competence as a whole and each of its structural components among the respondents in the experimental and control

groups are in the range of the base level. Using the methods of mathematical statistics allowed us to confirm the absence of statistically significant differences in the distributions in the samples of the EG and CG groups. This confirms the identity of the control and experimental groups in terms of both the inclusive competence as a whole and all the structural components at the ascertaining stage.

The obtained data suggest that the control and experimental groups as a whole and in the context of the selected subgroups can be characterized as homogeneous and having equal “starting” capabilities (Fig. 2).

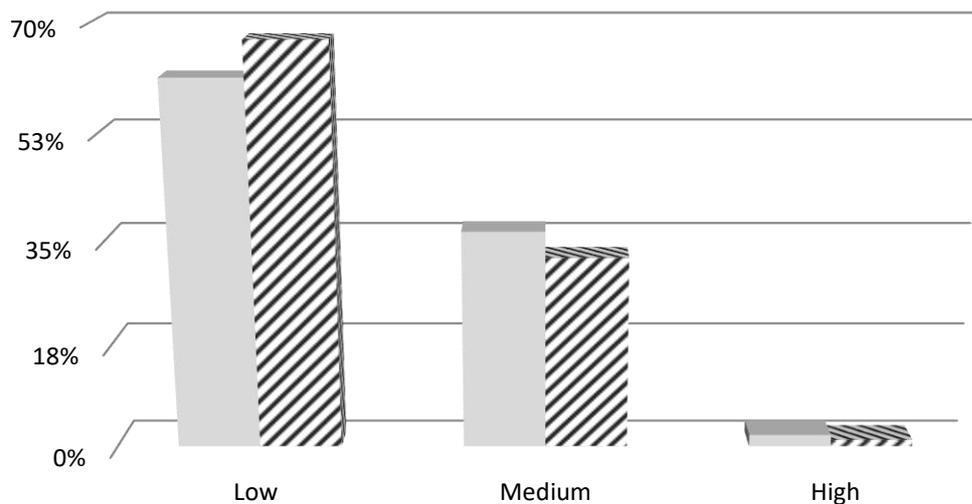


Figure 2. Generalized diagnostic results of the development level of experimental and control groups' inclusive competence (ascertaining stage)

The results obtained during the re-diagnosis indicate the changes that have occurred in all the components of inclusive competence in the EG.

The dynamics of the prevalence of external positive motivation was 65.28% / 64.84%, $t = 2.04$ $p \leq 0.05$). The dynamics of the prevalence of internal motivation (31.57% / 35.16%, $t = 2.13$ $p \leq 0.05$). External negative motivation is not revealed.

The dynamics of the results of the CG students did not reach the zone of significance: external positive motivation - 63.39% / 64.02% $t = 0.01$ $p \geq 0.01$; internal positive motivation - 32.16% / 32.17% $t = 0.41$ $p \geq 0.01$; motives for avoiding negative consequences - 4.44% / 3.81% $t = 0.02$ $p \geq 0.01$.

A qualitative analysis of the state of the cognitive component of inclusive competence demonstrated positive changes in the majority of students in the experimental group (Fig. 3). With a keen interest in inclusive education, future teachers began to demonstrate a desire to acquire knowledge of the way of organizing this type of education abroad and in Russia.

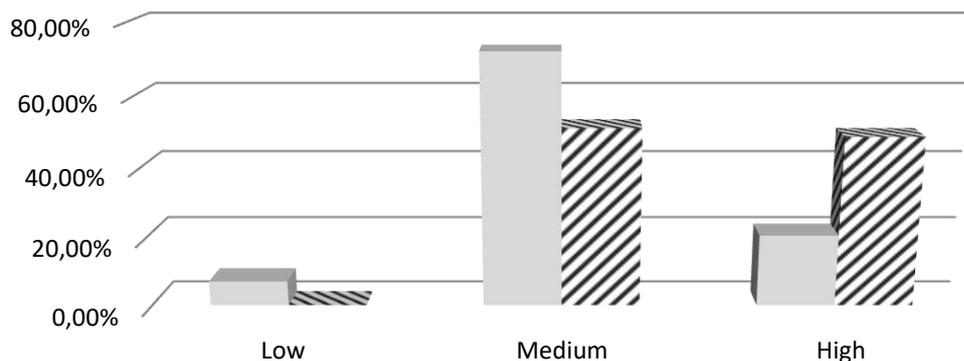


Figure 3. The results of the control diagnosis of the development level of experimental and control groups' inclusive competence cognitive component

The operational component revealed a significant decrease in the number of students with a low level in the EG from 90.93% (812 people) to 16.13% (156 people), the average level in the EG 9.07% (81 people) rose to 56.43% (504 people) and 26.09% (233 people) began to have a high level. In the control group, the dynamics of changes was insignificant - low 88% (851 people) / 81.9% (792 people), average 12% (116 people) / average 18.09% (175 people).

Reflective component positive dynamics was diagnosed in the EG: 56.21% (502 people) showed a low level at the beginning of the experiment, after studying an inclusively oriented course - 10.3% (92 people), which indicates the acceptance of children with disabilities and the desire to create friendly relations in the children's team. At the ascertaining stage, 43.78% (391 people) and 73.46% (656 people) showed an average level. A high level was recorded in 16.23% (145 people). During the observations, the students recognized the importance of including children with disabilities in society, recognizing them the right to choose the way to get education.

In the control group, no significant changes occurred. Low level- 59.04% (571 people) / 55.49% (498 people); average - 40.95% (396 people) / 48.5% (469 people).

Thus, during the study it was found that a high level of inclusive competence in the EG reached 35.94% (321 people), an average - 64.05% (572 people), a low level was not presented. The students of this group began to express their intention to replenish special knowledge, to understand the complexity of inclusive education.

The data on the CG did not significantly change: a high level of inclusive competency reached 3.92%, an average - 47.79%, a low 48.29% (Fig. 4).

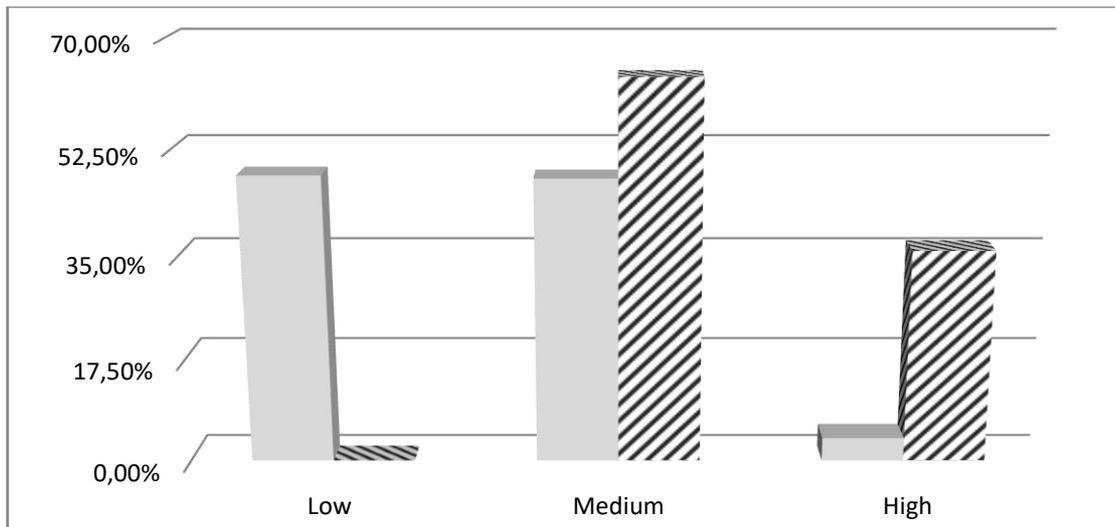


Figure 4. The generalized results of the diagnostics of experimental and control groups' level of inclusive competence development (a control stage)

Thus, the study conducted on the basis of the Astrakhan State University allows us to draw the following conclusions:

The control and experimental groups had equal “starting” capabilities. At the control stage, the indicators of the formation of both inclusive competence as a whole, and each of its components for all the respondents were in the range of the basic level.

During the formative stage, the students of the experimental group mastered the developed inclusively-oriented course called “Inclusive teacher competency”. The emphasis was on the use of interactive forms, methods and teaching methods.

The results of the control stage showed an increase in the level of inclusive competence development among the students of the experimental group as opposed to the control one, that is, the hypothesis was confirmed.

The students who studied the course began to express the desire to achieve educational results, the interest in the effective organization of inclusive education, willingness to work in an inclusive environment and overcome possible difficulties. The results are also supported by the Norwegian scientists' studies (Cameron, 2017).

Discussions

The review of the psychological and pedagogical theories of the problem of creating an inclusive educational space suggests that the interpretation of inclusive education only as training for disabled people prevails in Russia. However, the practical experience of European countries gives reason to comprehend the concept of “inclusive education” more broadly.

The following groups of people can be included in inclusion: people with disabilities, representatives of ethnic minorities, people of non-traditional sexual orientation, people held in penitentiary institutions, marginalized sections of society, including HIV-infected people, migrants, foreign students, people in difficult situations, gifted individuals, etc.

Understanding inclusion in a general sense requires a deep theoretical and methodological development of the problems of effective including not only children with disabilities, but also other categories of children with learning difficulties in a comprehensive school environment.

The question of the optimal distribution of educational resources and study time not only among students with disabilities, but also among students with a developmental standard also requires close attention of scientific community. This, in particular, is confirmed by the recent studies (Shogren et al., 2015).

In addition, in order to prepare teachers for inclusive education, it is necessary to take into account students' individual characteristics, the conditions of the educational activity presented to students, and institutional context (Webster & De Boer, 2019).

Conclusion

The developed and tested inclusively-oriented course called "Inclusive teacher competency", aimed at future teachers' acquisition of methods and experience in fulfilling professional tasks in the process of inclusive learning, was based on a modified model of inclusive competence as an integrative personality education. The model includes a set of interconnected components: motivational, cognitive, operational, reflective. The study monitored changes in all the components. The redundancy of the developed tasks and exercises within the framework of the course makes it possible for a teacher to use them in working with students with different educational experience.

The effectiveness of the empirical study was confirmed by positive dynamics in the experimental group of students: changes in the knowledge component, motivational orientation, mastery of inclusive education technologies. A direct relationship was established between the development of an inclusively-oriented course and the positive dynamics of inclusive competence development.

The results of the pilot study suggest that the potential of all the pedagogical disciplines and the inclusion of inclusively-oriented courses in the educational content affect the level of formation of future teachers' inclusive competence.

The hypothesis has been proved: the formation of inclusive competency will be more effective when students study the "Inclusive competence of a teacher" course.

The obtained results became the basis for the adjustment of the main professional educational programs: the developed elective course was included in the block of compulsory disciplines.

It has been proved that monitoring the results of mastering a program, analyzing the architecture of educational programs and timely adjusting it contribute to more effective preparation of students for inclusion.

Prepared and tested educational and methodological developments on educational process organization aimed at forming future teachers' inclusive competence in the vocational training process can be applied both in the higher education system (including one within the framework of specialization), and in the system of secondary and additional professional education.

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