The impact of role-playing games on developing empathy of future preschool inclusive teachers

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Abstract— Inclusive education should be based on the effective involvement of people with disabilities in the educational process to obtain positive results. The work aims to determine the impact of role-playing games on developing empathy of future inclusive teachers. The aim was achieved using the Likert scale, observation, value function calculations, the rank coefficient of the level of effectiveness, and the Cramér criterion. The results of the study showed that it is necessary to ensure that students' experiences during communication are considered first and foremost for the effectiveness of learning in an inclusive class and the development of empathy (0.93). Therefore, this criterion was primarily considered during the development of learning mechanisms. Training mechanisms for future teachers were intended to ensure the formation of an adaptive function, a communicative function, an understanding of a new approach, and the formation of an educational function. The game-based approach became the foundation of the educational process. A high level of empathy was achieved among 89% of students, which is associated with the development of tolerance. A high level of empathy was reflected in the development of communication (28%), creative activity (27%), and a greater level of restraint (23%). An individual approach in the process of teaching preschoolers influences their achievement of a high level of knowledge. The importance of the work is determining approaches to the development of a high level of empathy among future inclusive teachers using role-playing games, which is important for children's development. Research prospects are related to the possibilities of developing empathy for future teachers by using the role-playing approach in education and digital technologies.

Keywords—situational tasks, projection of actions, inclusive group, physiological limitations, communicative function, imitation of students' actions, emotionality, psychological state, behavioral reactions.

I. INTRODUCTION

THE relevance of this topic is to create optimal conditions for inclusive students, which will allow them to study in normal conditions. Moreover, students with certain limitations can study at the same level as other students. Inclusive education is aimed at ensuring the self-realization of students, which provides for the involvement of teachers with a high level of professional competence.

Inclusive education involves the process of active involvement in the learning process of students with special educational needs. Inclusive education aims to eliminate discrimination and shows equal value and rights among people, [1]. Therefore, the process of teaching such children should be based on the search for new approaches. Pedagogical approaches should focus on the use of individual methods to reveal students' capabilities. For this purpose, during the training of future teachers, it is necessary to provide for the study of factors that can affect the assimilation of the required level of knowledge. It is also necessary to determine factors that have an impact on personality development, which is related to the development of cultural, social, and other parameters, [2]. These factors should be aimed at ensuring the children's adaptability to the environment. High effectiveness of inclusive education can be achieved if teachers focus on moral and ethical requirements. Teachers should pay special attention to the education of preschoolers who have certain psychological and physiological limitations, [3]. Therefore, attention should be paid to the development of empathy during the training of future teachers.

Empathy is the process of perceiving the state of mind and experiences of another person, which contributes to the determination of his/her individuality and uniqueness, [4]. Emotionality in education positively influences the perception of the teacher by students with disabilities, which is reflected in the understanding and memorization of the material. The formation of tolerance, and understanding of students' problems and experiences should be considered during the development of empathy in future teachers. It is also necessary to apply an individual approach to resolving a particular

situation, [5]. It is possible to achieve a high-quality process of inclusive education because of the development of specialized training programmes, and the involvement of innovative technologies and methodological tools. It is also possible to achieve a high level of training for future inclusive teachers using game-based approaches in education. This will enable simulating individual situations that may arise in the real educational process, [6], [7]. The role-playing game contributes to the creation of a game-based approach to learning, which is reflected in the performance of a separate role by students. The approach affects the formation of a conscious perception of a particular situation. Role play promotes the development of communication, the ability to listen to other opinions, to achieve greater motivation and emotionality because of solving the given task, [8]. Role-playing games are aimed at the formation of consciousness, learning new things, mutual assistance, and the development of professional abilities.

The authors determined significant gaps based on the theoretical framework of the research. They are related to the lack of a detailed study of the development of empathy of future inclusive teachers using role-playing games. Most of the studies focus on the creation of various mechanisms of inclusive education, which contribute to the development of general professional skills. The work aims to determine the effectiveness of role-playing games for the development of empathy of future inclusive teachers, which contributes to the development of professional skills. The research objectives comprised the following aspects:

- determine the criteria of empathy, the development of which should be taken into account for future preschool teachers in the educational process;

- develop learning mechanisms for the development of empathy of future preschool teachers focusing on the possibility of using role-playing games;

- determine the achieved level of empathy by students, focusing on the general theoretical method of observation;

- determine the level of acquired knowledge of preschoolers with physiological disorders as a result of conducting classes by future teachers, using the calculation of the rank coefficient of the level of effectiveness.

II. LITERATURE REVIEW

The preparation of future teachers for teaching in inclusive classes can be implemented through the inclusion of online reports. This eliminates possible fears regarding the preparation of teachers for teaching in inclusive classes, as well as possible concerns. Conducting online communication with children with disabilities during training allows preparing students for professional activities. The approach reduces the gap between theory and practice, as well as forms the emotional stability of future teachers, [9]. Emotional preparation of future teachers for learning in inclusive classes allows them to overcome inequality in society. The threshold concept theory was chosen for teaching students. This approach to education provided for diversity in education, which involved the use of various educational programs and

technologies. Emphasis should also be placed on discussing problematic issues, [10]. Inclusive education in modern educational reform is aimed at considering the abilities of all students in one classroom. However many teachers are not ready for such an approach to education, which requires the formation of psychological awareness and the development of emotionality. The best method for gaining such experience is field conditions: conducting classes directly in inclusive classrooms. The cooperation of future teachers and school teachers will make it possible to develop the most correct training programs, to understand possible problems and ways to solve them. Group discussion contributes to better learning, [11].

The development of literacy is one of the main factors for ensuring access to information and communication. Children with limited physiological capabilities have many obstacles in their learning (lack of understanding, communication, fears), as well as the lack of specialized programs. Solving the problem became possible by ensuring consistency in education and its analysis. It includes decoding and phonological awareness tasks. Teachers' intervention in reading allows for the formation of a conscious approach to learning, which contributes to the mixing of sounds, word recognition, phoneme segmentation, etc. Teachers need to receive the appropriate level of training and understand the difficulties that may arise in an inclusive classroom to achieve a high level of teaching, [12]. Walks in the park are appropriate to ensure the effectiveness of the learning process for preschoolers with disabilities. "Open air school" can stabilize the psychological state. A total of 30 training events of 2 hours per week were planned as part of studies in the green zone. This approach has a positive effect not only on the children but also on the teacher, which is reflected in improved well-being, [13].

Integration of children with disabilities into inclusive classes requires specialized training of future teachers. The curriculum in kindergartens should include the use of games, which requires a meaningful approach of teachers to learning. A relationship between the child and the teacher should be found, as well as flexibility and social interaction should be ensured in learning. Learning should be based on joint problem-solving, communication, and vivid practices, involving a creative approach, [14]. The use of modern technologies in the system of inclusive education has a differential value, as it allows creating a new educational environment and using additional resources. They also contribute to the implementation of inclusive strategies. Future teachers must not only have digital skills but also be psychologically prepared. The teachers must design curricula according to students' needs, [15].

The literature review showed a variety of studies on inclusive education. A more detailed analysis revealed that most of the works are aimed at providing psychological support for children in an inclusive class. The development of future teachers' empathy is studied superficially.

III. METHODS

A. Research Design

Four main stages were planned for conducting the research. The first stage of the research was related to the definition of criteria that have the greatest influence on the development of future teachers' empathy. The results were obtained at the first stage of the research, which was associated with the organization of an effective learning process. The second stage of the research was related to the definition of mechanisms aimed at preparing future teachers to work in inclusive classes. The learning process was aimed at developing students' empathy because of using role-playing games. Role-playing games were aimed at developing educational, adaptive, and communicative functions, as well as at understanding new experiences. The training took place for three months in 2023 in the classroom. After completing the training, the future teachers held classes in preschool education institutions for a week.

The third stage of the study consisted of determining the level of empathy developed in future teachers. The results were obtained because of analyzing the behaviour and interest of future teachers in the learning process. Results were also obtained through conducting the exam and the approach to solving situational problems. Determining the level of students' empathy was associated with establishing a positive effect on their professional activity in the learning environment.

The fourth stage involved determining the level of assimilation of the material by children of preschool age. The topics of the classes were different and related to social development, speech development, studying nature, etc. This stage of the research was to determine the level of assimilation of information by teachers and future preschool teachers. Indicators from respondents were obtained by using a Likert scale.

B. Sampling

It became possible to conduct the research as a result of the involvement of 225 students who studied at Yuriy Fedkovych Chernivtsi National University. The sample of research participants was limited to students studying to be future preschool teachers in the 2nd year. Restrictions on the year of study are related to the beginning of studying specialized subjects and the exclusion of general ones. The limitations were related to the inclusion in the research of future preschool teachers for preschool education institutions, focusing on inclusive education. The study also involved 18 teachers, who supervised the training process of future preschool teachers. Future preschool teachers taught 250 children studying in preschool education institutions. Children with physiological limitations - disorders of the musculoskeletal system diagnosed with infantile cerebral palsy (mixed form) — were involved in the study.

C. Methods

The criteria that influence the development of empathy of future preschool teachers were identified using a general theoretical method of analysis, [16]. The method of analysis was aimed at determining the effective conduct of classes as a result of the developed level of empathy of the teacher and determining the mechanisms of their achievement. This involved a comparison of the preschool education system in regular and inclusive classes. After the established criteria, the gradation of their importance was obtained by calculating the value function according to Formula 1. The calculation provided for comparing the most important criterion as the ratio with others. The formula was developed by the authors of the article:

$$f(x, v) = k_x f_x(x) + k_v f_v(v) \qquad (1)$$

k_x – coefficient of relative importance of the studied criterion for the effectiveness of classes;

k_v – coefficient of relative importance of the studied criterion for the development of empathy;

$f_x(x), f_v(v)$ – are indicators of the vector direction of the criterion.

The development of training mechanisms for future preschool teachers was based on the development of individual functions that are necessary for the development of the empathy criterion. It was planned to use role-playing games during the study of the material. The games were chosen in such a way as to develop one or more necessary functions (educational, adaptive, communicative function, understanding of a new approach). Some examples of role-playing games are presented in Appendix A. Based on the games presented in Appendix A, others were created that differed in the initial conditions. The training combined regular classes (lectures, seminars, practical work) with role-playing games. However, 70% of the time was allocated to role-playing games in education.

The obtained level of empathy and its positive impact on the activities of future teachers were determined using the general theoretical method of observation. The teachers observed the level of students' interest in performing the assigned tasks during the role-playing games. The level of professionalism, manifestation of emotionality, and the correctness of choosing an option to resolve a particular situation were considered. This approach made it possible to present percentage ratios in the main part of the work.

A Likert scale, [17], was used to determine the level of children's knowledge of the topic in an inclusive education. According to the Likert scale, teachers and future preschool teachers had to provide information about the acquired level of knowledge of children within 5 hours. According to the Likert scale, teachers assigned points from 1 (low level) to 5 (high level). Results were sent by e-mail. The respondents had to justify their opinion on each child to check the accuracy of the provided data. They also had to identify gaps in the studied material (if any). After the obtained data, the rank coefficient of the level of effectiveness developed by the authors of the

article was calculated:

$$k_p = \frac{(g-1)^2}{g} ig \qquad (2)$$

g – received score for the effectiveness of knowledge acquired by each child

i – coefficient for diligence during classes (equal to 0.1 to 0.7)

D. Data analysis

Verification of the obtained results required a sound analytical approach using the calculations of the Cramér criterion, [18]. It shows the degree of relationship between the parameters. Cramér's criterion provides a comparison of different quantities, which provides greater clarity in calculations based on algebraic equations. The coefficient provides for the expression of the relationship through a square matrix of coefficients by replacing one column with another column. Cramer's criterion was used in the study because it is easy to use and provides particular indicators.

Statistical calculations were carried out to compare the criteria that students need to develop to achieve a high level of empathy. To determine the level of empathy achieved by future preschool teachers and the level of knowledge acquired by preschool children:

$$V = \sqrt{\frac{\chi^2}{n(r-1)(c-1)}} \qquad (3)$$

χ^2 – the value of the selected criterion;

n – sample size;

r – the number of criteria for the study;

c – the number of variables for the study.

A strong relationship between indicators will be observed if the calculation criterion is equal to 0.8 - 1.0. A weak relationship is observed if the criterion ranges from 0.1 to 0.2; there is no relationship if it is less than 0.1.

E. Ethical criteria

During the study, the authors followed the ethical standards published by The Norwegian National Committee for Research Ethics in Science and Technology, [19]. Ethical norms provided for the involvement of respondents in the study who did not contradict the research criteria and did not have any conflicts of interest. The authors confirm that equal conditions of participation, as indicated at the beginning, were ensured for all respondents.

IV. RESULTS

The high-quality educational process in an inclusive education can be achieved because of a clear understanding by future preschool teachers of the level of emotional effect. The quality of classes depends on the development of empathy, which affects the communication between students and future teachers. Therefore, the first stage of the study consisted in determining the criteria that should be developed by students during their studies (Table I).

TABLE I. CRITERIA THAT CONTRIBUTE TO THE EFFECTIVENESS OF LEARNING AND THE DEVELOPMENT OF EMPATHY IN FUTURE PRESCHOOL TEACHERS

Criterion	$f(x, v)$	Comparison of results using Cramér's V				
		Projection (imitation) of students' actions	Considering the students' experiences (fear) during communication	Development of future preschool teachers' interest in conducting classes	Development of future preschool teacher's understanding of the problems of each of the students in the inclusive group	Development of sensitivity
Projection (imitation) of students' actions	0.86	-	0.731	0.803	0.894	0.920
Considering the students' experiences (fear) during communication	0.93	0.731	-	0.972	0.786	0.793
Development of future preschool teachers' interest in conducting classes	0.90	0.803	0.972	-	0.935	0.814
Development of future preschool teacher's understanding of the problems of each of the students in the inclusive group	0.87	0.894	0.796	0.935	-	0.952
Development of sensitivity	0.84	0.920	0.793	0.814	0.952	-

It was established that future preschool teachers should first of all take into account students' experiences (fear) of during communication. This is a psychological factor that contributes to building a relationship between the participants of the educational process. This approach will be reflected in the possibility of better memorization of information by preschoolers. It will also enable the identification of limiting factors in education that affect the achievement of a certain educational goal. The development of this criterion is possible due to the recognition of behavioral reactions in preschoolers. Considering the students' experiences provides a calm atmosphere in the educational process, which ensures a more meaningful approach to information perception.

The development of future preschool teachers' interest in conducting classes contributes to the preschooler's motivation to learn the necessary information. If preschoolers see the teachers' interest in teaching the topic, they will be able to overcome their fears and behave more freely during classes. It will also affect the ability to create meaningful classes, observe objectivity, and motivate the creation of an extraordinary structure of classes. The process will contribute to the search for new educational materials that will have a positive impact on the educational process. For example, additional associations can be found, which helps to memorize materials.

An understanding of the problems of each preschooler in the inclusive group by future preschool teachers can be achieved as a result of a preliminary study of the physiological limitations of children. The criterion will ensure an individual approach to each child, which will be reflected in their correct reaction to the perception of information. Understanding the limitations of inclusive classes will ensure the cognitive, physical, social, and emotional development of children. It also promotes the development of the most correct approach to the education of preschoolers. The process will also promote interaction between children.

Projection (imitation) of students' actions contributes to the development of trusting relationships in communication between preschoolers and teachers and affects the improvement of performance. The criterion will make it possible to predict approaches to the development of preschoolers, to help correct their behavior. It will also help to form the psychological readiness of preschoolers for active participation in the educational process. Developed empathy affects the preschoolers' perception of the teacher, which is reflected in respect and, elimination of possible conflicts.

The development of sensitivity is connected with other criteria that affect the development of empathy, which contributes to the formation of "psychological individuality" for each child. The criterion has an impact on the development of the overall effectiveness of training and the establishment of professional communication. The development of sensitivity is related to the consideration of psychological aspects, which contribute to the building of trusting relationships between teachers and preschoolers. Statistical analysis using the Cramér criterion showed the relationship of values, which is related to the significance of the established criteria.

The identified criteria of empathy contributed to the formation of educational mechanisms that were aimed at using role-playing games for training future preschool teachers. The mechanisms were aimed at forming the emotionality of future educators, which contributes to meaningful learning. The mechanisms were aimed at preparing future preschool teachers to work in inclusive classes with children with physiological disorders (Figure 1).
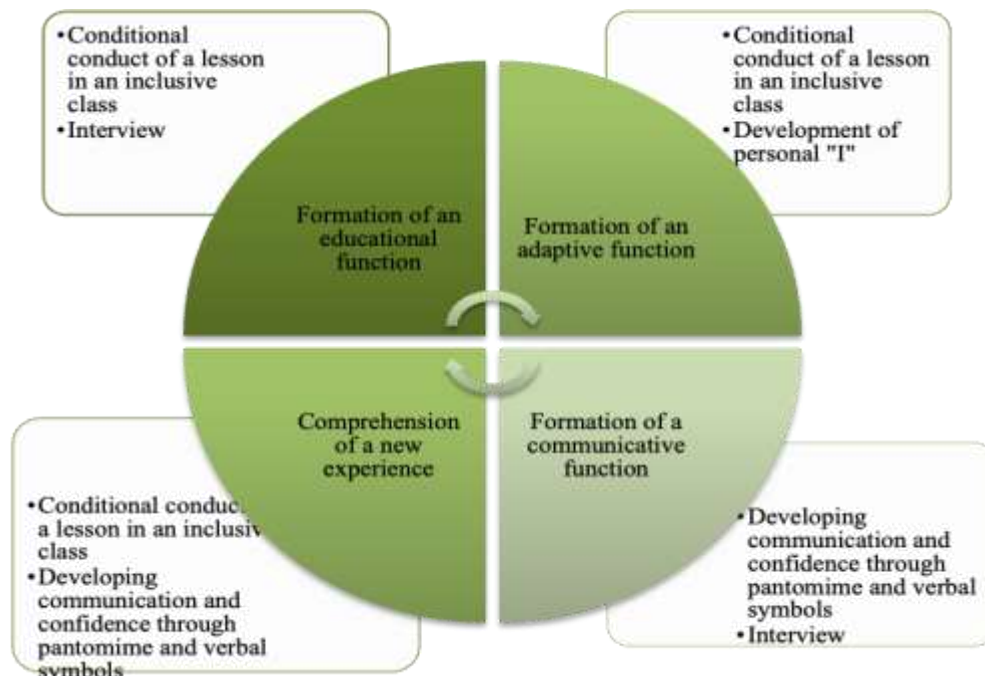

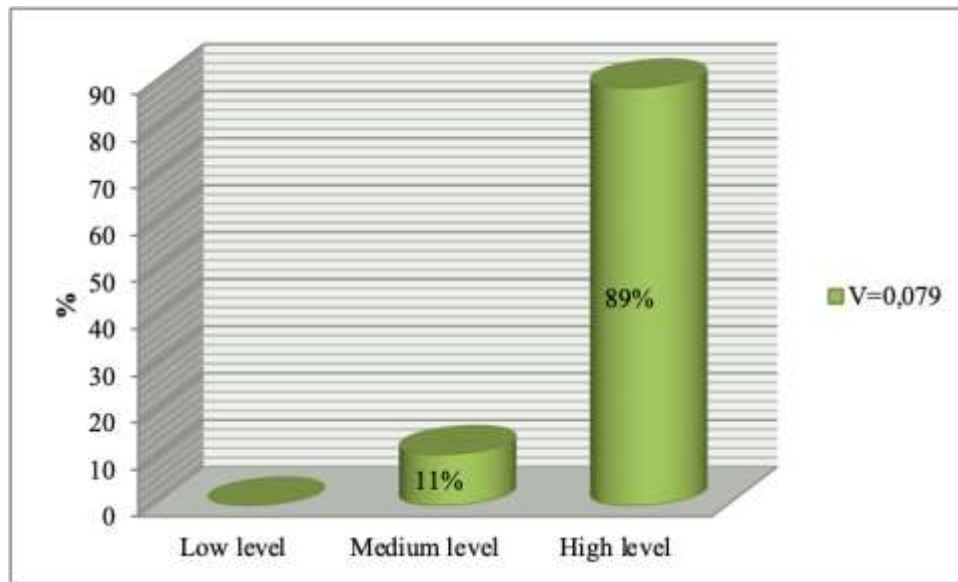Fig. 1 Mechanisms for ensuring the training of future preschool teachers using role-playing games

Fig. 2 The level of empathy acquired by future teachers

As the educational process was intended to ensure the use of role-playing games for the development of empathy, it was preceded by the study of theoretical material. The formation of an educational, adaptive, communicative function and understanding of new learning experiences was based on the use of specialized role-playing games. The educational function is aimed at the development of aesthetic ideas about the world, and the understanding of norms of behaviour in an inclusive class. The development of the educational function is aimed at the possibility of developing the worldview and social behavior of preschoolers.

The adaptive function is aimed at adapting future preschool teachers to teaching in an inclusive class, which involves the selection of specialized programs and individual approaches to teaching children. The development of the adaptive function is interconnected with the capabilities of future preschool teachers in organizing the educational process by the preschoolers' needs and capabilities.

The communicative function is aimed at setting up a dialogue in the educational process. The role-playing games are aimed at finding a common language with children, which allows them to adjust the education system. This approach is also aimed at forming developmental work and providing the possibility of a deeper understanding of the educational topic.

Comprehending a new experience involves finding criteria for conducting classes, adjusting the educational process, and finding creative mechanisms for presenting information. Gaining new experience is based on the formation of creative abilities, which is aimed at enhancing the preschoolers' interest in learning.

After 3 months of training delivered to future preschool teachers, the level of empathy they had developed was determined (Figure 2).The use of role-playing games in the training of future preschool teachers showed high efficiency in emotional perception of the surrounding environment. It was established that the largest part of teachers acquired a high level of empathy, which is aimed at ensuring an emotional response. This part of students was also able to respond to the experiences of others, which affected the possibility of establishing better communication. Achieved a high level of empathy is associated with the preservation of tolerance, and tact when teaching in inclusive classes. It was also reflected in the enhanced children's interest in attending classes. A high level of empathy was associated with the development of psychological aspects that will contribute to a better understanding of children.

There was no low level of empathy among future teachers, and a medium level was developed among a small number of future preschool teachers. Students with a medium level of empathy controlled their feelings and emotions, which partly influenced the preschoolers' repulsion. Those students did not fully understand the problem of another person, which affected the quality of the classes. The medium level of empathy was obtained by students who lacked emotionality at the initial stage of the study. The problem can be solved with the help of regular exercises in a group for conducting role-playing games.

When determining the level of developed empathy among students, it was also determined what positive effect it had on future preschool teachers (Figure 3).

The development of communication was connected with the use of a non-standard approach in education — role-playing games. The development of this skill influenced the possibility of providing an individual approach to education, taking into account the needs of children with physiological limitations. The development of communication among students influenced the performance of professional tasks in an inclusive education and also ensured the self-development of children. This affected the possibility of providing a professional approach to the performance of tasks in an inclusive education.

Future preschool teachers also developed their creative activity during training, which allowed them to creatively approach the resolution of situational tasks.
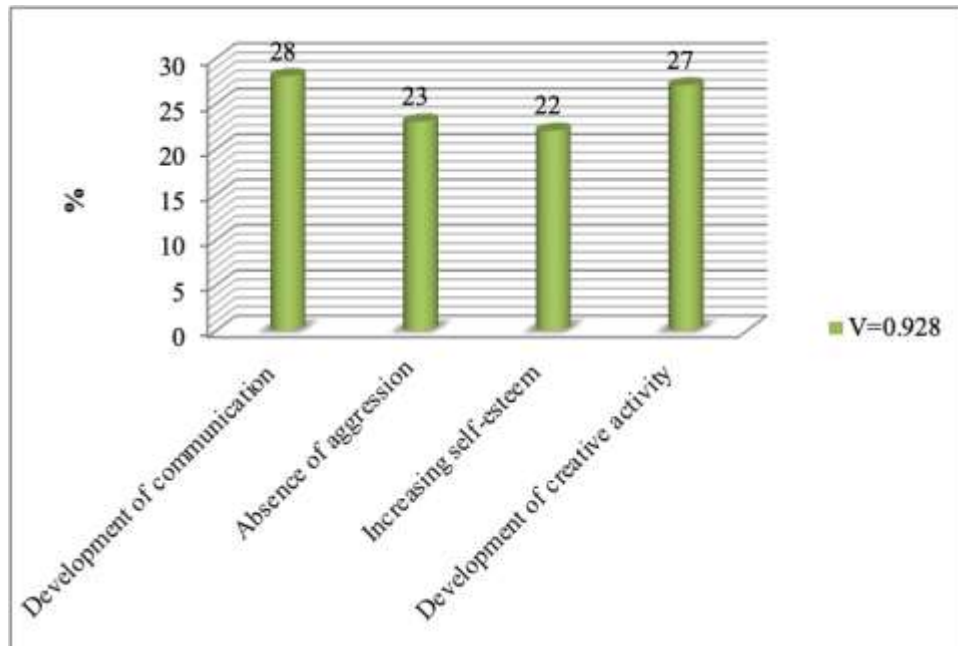
Fig. 3 Positive effect of the development of empathy among future preschool teachers

The development of creative skills influenced the possibility of forming new thinking and obtaining new approaches to conducting classes. It also has an impact on the general behavior of students, which contributes to the perception of the surrounding reality and the possibility of organizing the educational process. The positive effect of the development of creative skills is also related to the possibility of considering children's opportunities to change inappropriate learning approaches.

Future educators became more restrained, which excluded aggressiveness. This made it possible to treat the children of the inclusive class with understanding when they were performing individual tasks. The absence of aggression influenced tolerance, which excluded the condemnation of children's wrong actions during their fulfillment of assigned tasks. It contributed to a better explanation of approaches to fulfilling particular objectives.

Increased self-esteem was reflected in the establishment of positive communication. The future preschool teachers were able to conduct lessons freely, which contributed to the exchange of positive emotions. During the role-playing games, students were able to correctly express their opinions, which improved the quality of discussing the situation. The teachers were not afraid to respond to children's difficulties and ensure a stable learning process. The calculation of the statistical coefficient showed the relationship of the obtained values regarding the positive effect of the development of empathy of future inclusive teachers.

The third stage of the research involved determining the level of development of preschoolers in practice. The results were compared based on the data of teachers and future preschool teachers who conducted classes during the week (Table II).

TABLE II. CRITERIA THAT CONTRIBUTE TO THE EFFECTIVENESS OF LEARNING AND THE DEVELOPMENT OF EMPATHY IN FUTURE PRESCHOOL TEACHERS

The level of obtained knowledge	Teachers' assessment	Future preschool teachers' assessment	V
High level	7.5 (81%)	7.5 (81%)	1.0
Sufficient level	5.1 (15%)	5.3 (17%)	0.941
Medium level	3.6 (4%)	3.4 (2%)	0.878
Low level	-	-	-

It was established that according to future preschool teachers and teachers, the preschoolers received a high level of knowledge. The results are associated with increased concentration of children's attention as a result of providing an individual approach to learning information. The results of learning information were also influenced by the use of a game-based approach to conducting classes. Positive results are associated with establishing communication between future preschool teachers and preschoolers. High results are associated with finding an alternative for solving problems.

Differences in the obtained sufficient and medium levels of knowledge among these teachers and students are related to the perception of information by preschoolers. However, not all information was learned during classes, which is determined by the insufficiently thought-out approach of all students to the presentation of information. However, the established emotional connection contributed to the minimization of acquiring a lower level of knowledge. Statistical analysis of values by using Cramér's criterion showed the relationship between the obtained data of the teacher and future teachers.

V. Discussion

The education of children with neurodevelopmental delays and disabilities in preschool institutions should be based on the retraining of teachers. Learning in kindergartens can be game-based. Focus on the game eliminates social isolation and increases the level of social participation. The teacher shall play the main role in the game. The teachers must use different strategies to involve children in participating in society. They should also show the benefits of the game and support all children, [20]. Emphasis on the training of inclusive teachers should be placed on finding possible problems and developing professional competencies. Special attention should be paid to the relationship between the experience gained and the level of emotional intelligence. This will make it possible to achieve a diverse approach to learning, as well as to ensure contact with people with disabilities. The approach has a positive impact on the teacher's professional activities in the future, [21]. The use of blended learning during the training of future inclusive teachers makes it possible to achieve greater efficiency. Blended learning involves the development of classes in schools and educational institutions. This promotes the acquisition of certain knowledge and skills that contribute to making professional decisions. The approach contributes to a more conscious perception of the learning process and planning of future activities, [22]. The analysed studies focus on the possibility of using game approaches for teaching children, and the development of professional competencies in the context of blended learning. At the same time, the conditions of the educational process were not specified (level of children's development, physical limitations, etc.). Our article clearly stated the conditions for the educational process. The focus was on the training of future preschool teachers in terms of inclusiveness.

Digital technologies in inclusive classes contribute to the development of children's creative abilities and enhance their motivation. Digital technologies will make it possible to conduct learning analytics, which helps to determine the cognitive, emotional, and behavioral activity of learners. Teachers should identify possible barriers to learning, as well as determine ways to eliminate them, and promote constant interaction with children, [23]. The use of mobile devices in the education of preschool children with autism spectrum disorder facilitates the selection of relevant educational programs. Mobile devices will enable the development of communication, academic, and social skills. They also make it possible to simplify the process of adaptation of teachers to work in inclusive classes, [24]. The presented articles explore the possibilities of conducting lessons in inclusive classes with the help of digital technologies. Our article did not emphasize digital technologies. The research involved establishing empathy criteria, the development of which affects the effectiveness of the educational process and ensures the perception of information by preschoolers.

The education of preschoolers in inclusive classes can be implemented with the help of inclusive movement classes. The service learning program made it possible to develop the skills of future teachers to conduct lessons in inclusive classes. The analysis of reflective notebooks revealed that motor activities contribute to functional diversity and the elimination of existing problems, [25]. Well-thought-out teacher training for teaching in an inclusive school contributes to the preparation of highly qualified teachers. Shortcomings in the preparation of teachers for inclusive education are related to the limitation of acquiring the necessary competencies, the lack of diversity, and the emphasis on theoretical education. Eliminating barriers during initial training allows for higher learning outcomes, [26]. The main teacher's role in inclusive education is to use diversity to build a learning system that allows adapting to students' problems. Emphasis should be placed on a system of intervention actions, which contributes to the improvement of teacher training and involves the evaluation of intervention programs, the evaluation of each component before training, [27]. There are political, financial, and social obstacles to providing inclusive education for children with disabilities. It is possible to improve future teachers' competence using a blended approach in education. This will make it possible to focus on systemic changes that affect the professionalism of future teachers, [28]. No shortcomings in inclusive education were found in our work. However, it was found that the development of empathy had a positive impact on the development of communication, creative activity, the absence of aggression, and increased self-esteem of future preschool teachers. The positive value of the proposed learning mechanisms was verified during the teaching of preschool children.

To ensure the effective activity of future inclusive teachers, it is necessary to ensure the development of their individual qualities. This will make it possible to fulfill the assigned tasks qualitatively and contribute to self-realization, [29]. It was established that such qualities can be value orientation, empathy, and benevolence, which contribute to the development of the teacher's professional competence, [30].

The analysis of studies showed that they are aimed at defining diversity in education, which allows for more thorough training of future teachers. Our research is aimed at ensuring the effectiveness of teaching in inclusive classes as a result of empathic development. The effectiveness of training was achieved using role-playing games in training. The study established the criteria to focus on for the development of empathy of future preschool teachers (projection of students' actions, consideration of students' experiences during communication, development of future preschool teachers' interest in conducting classes, formation of future preschool teachers' understanding of the problems of each of the students in the inclusive group, development of sensitivity). Educational mechanisms were also developed, which contributed to the development of empathy of future preschool teachers and had a positive effect on professional activity.

VI. Conclusions

The aim of the study was achieved, which was to determine the positive impact of role-playing games on the development of empathy in future preschool teachers. For this purpose, the

criteria of empathy, which should be developed in future preschool teachers, were established. First of all, attention in training should be paid to taking into account the experiences of preschoolers during communication (0.93), as well as to the development of future preschool teachers' interest in conducting classes (0.90). These criteria will make it possible to exclude limiting factors in education and provide more meaningful education. Future preschool teachers should also develop an understanding of the problems of each preschooler in the inclusive group (0.87). This will make it possible to determine the most effective approach to learning, ensuring the correct reaction of preschoolers to learning.

These criteria of empathy were developed through the use of role-playing games. This provided for the development of educational, adaptive, and communicative functions and understanding of new experiences in the developed learning mechanisms. Orientation to the developed learning mechanisms contributed to the development of a high level of empathy in 89% of students. The results are related to the preservation of tolerance and correct response to the experiences of others. It also influenced the development of communication (28%), and creative activity (27%), which was manifested in a creative approach to solving situational tasks. The students also developed an absence of aggression (23%) and increased self-esteem (22%), which affected the correctness of expressing their opinions.

Conducting practical classes by future preschool teachers during a week in preschool institutions allowed them to determine the level of assimilation of information by children with physiological limitations. It was established that teachers (7.5) and future preschool teachers (7.5) determined that most children acquired a high level of knowledge. However, sufficient and medium levels differed, which is related to the approaches to learning used by students.

The practical significance of the work is in the possibility of developing professional skills of future preschool teachers through the development of empathy as a result of the use of role-playing games. Prospects for further research may be related to the comparison of the quality of using role-playing games for conducting classes for future preschool teachers as well as for preschoolers.

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APPENDIX A

Examples of role-playing games used in the training of future preschool teachers

Role-playing game #1. The students were given the task of conditionally conducting a lesson among children with physiological peculiarities in an open area (in a park). For this purpose, students should have used different intonation models and grammatical structures. The purpose of the game was to determine the actions and empathy of students during the lesson. Some students were assigned to teachers, others — to preschoolers. It was necessary to solve the situational tasks set before different groups.

Role-playing game #2. The role-playing game is aimed at the development of the personal "I". The conditions of the game provided for the discussion of one's experiences that may arise during the educational process, and ensuring the solution of these problems with other students. During the role-playing game, the personality of students is revealed, which is reflected in the development of their abilities. It also contributes to the growth of confidence in conducting classes and communicating with other people.

Role-playing game #3. The role-playing game is aimed at developing communication and confidence. For this purpose, some students used pantomime, while others used verbal symbols. The game is aimed at establishing dialogue. This approach contributes to a better understanding of a member of another group, which contributes to the expansion of cognitive abilities, situational awareness, and assistance to other students.

Role-playing game #4. The role-playing game provided an interview on a given topic aimed at expressing students' opinions. The role-playing game is aimed at ensuring free communication and building communication with others. The game helps to combine the studied material and ensure the appropriateness of its application. Performance of the appropriate role by the student reveals the student's behaviour of in certain circumstances, the level of empathy, and professional training.