

Professional training of future music art teachers for inclusive education: theoretical and technological aspects

Svetlana Sysoieva¹, Natalia Ovcharenko^{2*}, and Olga Chebotarenko³

¹National Academy of Educational Sciences, Department of General Pedagogy and Philosophy of Education, Kyiv, 04053, Ukraine

²Kryvyi Rih State Pedagogical University, Music Education, Vocal and Choir Conducting, Kryvyi Rih, 50086, Ukraine

³Kryvyi Rih State Pedagogical University, Music Studies, Instrumental and Choreographic Training, Kryvyi Rih, 50086, Ukraine

Abstract. The article is devoted to the actual problem of contemporary art education – to improve the professional training of future music art teachers for children’s inclusive education. Its purpose is to present the results of theoretical understanding of the developmental and healing potential of music, to develop technological support in future music art teachers’ professional training for children’s inclusive education. According to the results of the study, the basic concept of the study was defined as: “professional training of future music art teachers for inclusive education”, which is seen as an educational process aimed at ensuring students’ readiness to provide a system of educational services to persons with special educational needs in their future professional activity, and it involves mastering their inclusively oriented musical and pedagogical knowledge, skills and personal qualities. To improve the professional training of future music art teachers for children’s inclusive learning, the findings of the latest research in the field of art and music-pedagogical theory concerning the harmonizing and music-therapeutic influence of music on the personality of a child in need of educational inclusion were used; criteria of musical works selection for children with psycho-physiological disabilities have been identified; there was developed and substantiated developmental and corrective technique of training singing that can be used in inclusive classes of different age, gender and cognitive abilities of children. Developmental and corrective technique of training singing includes innovative content of children’s teaching, comprising a specially selected vocal repertoire; lesson and extracurricular forms of training; specific teaching methods for students with special educational needs.

1 Introduction

The humanistic tendency of the modern world society is to increase attention to persons with special educational problems. The Ukrainian state, which has chosen a course on European integration, intensively develops and implements reforms aimed at the development of national inclusive education, as evidenced by such documents as: Law of Ukraine “On General Secondary Education” (2010), Law of Ukraine “On Education” (2017), the concept of the National Strategy for the Development of Inclusive Education for 2020-2030 (2019), which emphasize the importance of training highly qualified teachers able to provide quality services in the light of human educational needs. In this context, there is a growing need to address the problem of improving the professional training of future music art teachers for the children’s inclusive learning to be competent in the use of specific characteristics of musical art to shape their outlook, motivation, cognitive, emotional and volitional spheres; educational as well as correctional and developmental music techniques for children’s teaching and socialization. At the same time, the theoretical understanding of the developmental and healing potential of music art in relation to the technological provision of future music art teachers’

professional training in inclusive music education in general secondary education is poorly understood and needs special study.

2 Literature review

The influence of musical art on the spiritual and psycho-physiological spheres of the man has always been the focus of thinkers, scholars, musicians, performers as well as musicians-educators. In the time of increasing the negative effects of socio-political, environmental, man-made influence on the personality of a person, it is especially important to take into account the modern achievements of philosophy, art, music pedagogy, not only in revealing the essence and functions of musical art in the harmonization of the inner world of personality (H. Hesse [1], A. Samoilenko [2], S. Shushardjan [3]), and also in the problems of music influence on successful socialization of the person in the environment, which requires special educational needs, that is – educational inclusion (E. Ryabinina [4], S. Fadeeva [5]).

Analytical review of modern scientific sources on the problems of inclusive music education revealed that Ukrainian scientists thoroughly investigated in their scientific works the following: conceptual foundations of inclusive education of Ukraine (A. Kolupayeva [6],

* Corresponding author: shvager77@gmail.com

M. Poroshenko [7], O. Taranchenko [6]); main provisions of music-educational inclusion (O. Oleksiuk [8], O. Lyashenko [9]); theoretical and methodological principles of correction direction of musical activity (Yu. Bondarenko [10]); specifics of professional activity of music teacher in the conditions of inclusive education (A. Polychronidi [11]); the current state of professional training of future teachers of music art for educational inclusion (N. Ovcharenko [12]); music and therapy techniques and methods for working with children who have special educational needs (N. Bazima [13], N. Kvitka [14], O. Moroz [13]).

Inclusive music education for children with different educational needs, including autism, gender and physical problems is widely represented in a number of foreign researchers' studies (M. Hairston [15]; V. Kinsella, M. Fautley, S. Gray [16]; N. Sarrazin [17]; M. Winebrenner [18]).

However, the study of domestic and foreign experience made it possible to state that the theoretical and technological aspect of preparing future music art teachers training for children's inclusive teaching in the main instrument and vocal class has not yet been the subject of a separate research.

Therefore, the objective of our study is to shed light on the results of theoretical understanding of the developmental and healing potential of music art, the development of technological support for the professional training of future music art teachers to children's inclusive education.

3 Research methodology

To achieve this goal, the following methods were used: theoretical analysis for the study of scientific works on this problem; specification for consideration of basic concepts of the research; analysis, generalization for the study of the harmonizing potential of musical art; classification for the distribution of music material into three groups according to age categories (for junior, middle and senior school age students); the rationale for determining the criteria for selecting composer works for artistic inclusion; theoretical substantiation for the development of developmental and corrective technique of teaching singing and its basic principles; synthesis and structuring to determine the content, forms, methods of professional training of future music art teachers for children's inclusive teaching.

4. Results of discussion

4.1 Inclusive education and inclusive learning

The solution of the problem of future teachers' training for children's inclusive learning involves defining basic concepts of the research as: "inclusive education", "inclusive learning", "persons with special educational needs", "professional training of future teachers of music art". In defining the concept of "inclusive education", legislative documents emphasize that it is a complex process of ensuring equal access to quality education [19]. At the same time, in the researches of modern scientists, and we hold on to this position, inclusive education is considered as "a continuous process aimed at creating an inclusive educational environment based

on the principles of tolerant attitude, respect for the individual characteristics of the child and non-discrimination" [7, p. 17].

The concept of "inclusive learning" is interpreted as a system of state-guaranteed educational services based on the principles of non-discrimination, respect for human diversity, effective involvement and inclusion of all its participants into the educational process [16]. Such training is needed by persons who: cannot attend school due to health condition; living in villages and towns (when the number of students in a class is less than 5 people); reside in an area of armed conflict, in a temporarily occupied territory of Ukraine, or in settlements in the territory of which state authorities temporarily do not exercise or fully exercise their authority; are in emergency situations of a natural or man-made nature; have high educational potential and can finish school fast; are foreigners or stateless persons [17]. In defining the concept of "person with special educational needs" we subscribe to the opinion of M. Poroshenko that such is "a person who needs additional permanent or temporary support in the educational process in order to secure his right to education" [7, p. 237].

The concept of "professional training of a specialist" is understood as a continuous controlled process of acquiring a personally subjective experience of professional activity, which allows to systematically and holistically perceive reality and act on the basis of humanistic value orientations, embedded in modern educational concepts of continuity, professional training in higher educational institutions for the formation of professional competence of the individual and successful careers taking into account the modern requirements of the labor market [22, p. 251]. We consider the professional preparation of future teachers of music arts for inclusive learning as an educational process aimed at ensuring students' readiness to master the basics of inclusive learning, as well as competences aimed to use musical and pedagogical knowledge and skills in the process of inclusive learning.

The difficulty of organizing this training is to teach and satisfy the educational needs of all children in music lessons. According to N. Kvitka's diagnostic study, there were three categories of children with special needs identified [14, p. 2]: the first category – students with typical cognitive development, who have sensory, speech, musculoskeletal disorders, and who can study according to the program of institutions of general education, for them, only in a special case, educational materials need adaptation; the second category is students with a slight decrease in cognitive development who have sensory impairments, mental retardation or severe speech impairment, and who may also study under the general education program, but the program material may not be acquired; and have considerable difficulty in learning the curriculum material. Awareness of such categories is necessary in the professional training of future music art teachers for children's inclusive learning, as it enables them to approach each child in a more differentiated manner and apply specific methodological techniques.

4.2 Instrumental music art as a means of harmonizing personality

The complexity and inconsistency of the modern world introduces a certain disharmony into the soul of a child, which forces one to close oneself from it, escaping into its own created world. In order for this illusory world not to completely swallow the child, having lost touch with reality, there are efforts required to overcome these boundaries, to find ways for internal harmonization and to build a “dialogue of consent” instead of a “dialogue of the deaf” [2].

Such an important connecting and harmonizing beginning is classical music, which, according to H. Hesse, is “an extract and embodiment of our culture, because it is the most clear, most characteristic, most expressive gesture. In this music, we own the heritage of Antiquity and Christianity, the spirit of cheerful and brave piety, unsurpassed chivalrous morality” [1, p. 34]. The selection of musical material becomes very important, which, on the one hand, will be the “standard” of harmony, purity, that is, those ethical and aesthetic qualities that make up the essence of the “ideal” world; on the other hand, it will be in tune with the soul of the child, his ideas about this world. Only in this case, through familiarization with musical creativity (perhaps due to performance), will there be a “dialogue of consent” [2], as a result of which a state of harmonious fusion with the world will be achieved.

Music therapy today is one of the most rapidly developing areas; as S. Shushardjan notes, this direction uses “more than 50 different musical and acoustic methods and techniques for correction of mental and physical health, disease prevention, social rehabilitation and creative development of a person” [3, p. 7]. As S. Fadeeva rightly claims, music is a very effective tool in psychiatry, as it well regulates emotional states, causing either peace, calm, or excitement. “The greatest effect of exposure to music is achieved when the patient performs it himself (plays the instrument, sings, and dances to the music). Active experience of music through performance is important for the restoration of motor abnormalities, singing is necessary in the treatment of respiratory diseases” [5, p. 18].

Many authors believe that the harmonization of music is achieved due to its nature, which includes vibrational, rhythmic and melodic spheres. S. Fadeeva notes that music can convey: moods (the whole spectrum, from positive ones – joy, fun, tenderness, to negative ones – despondency, anxiety); intellectual and volitional processes (determination, thoughtfulness, inertness, lack of will, seriousness, etc.); generalized properties of the phenomena of reality (strength, lightness, orientation, breadth, spatiality, etc.); characteristics of movements (fast, moderate, slow, lethargic, elastic, gusty, etc.) [5, p. 21].

The musical world can become the connecting link that establishes a connection between the real and inner world of the child. According to E. Ryabinina, “the actualization of musical qualities as aesthetic is therapeutically significant because it opens up channels for regulating the patient’s conditions, ordering and studying the effects on them through aesthetic experience” [4, p. 206]. Thus, through music

(performance), you can harmonize your inner world, and, on the other hand, find a way to interact with the external environment (communication methods).

According to many researchers, the selection of music depends on a number of reasons. It is necessary to take into account the emotional state, and the level of intellectual development, and the degree of disposition and perception of music, and age, and much more. In the work of each composer, you can find works that open up a special harmonious, ideal (illusory) world, devoid of conflicting acuity, contradictions and suffering. Researchers talk about a special harmonizing function of the works of W. Mozart and J. Brahms, but this list can be increased.

As S. Fadeeva notes, “most scholars prefer academic music of the European tradition of the era of classicism, the style of classic baroque (I. Bach), or romanticism (J. Brahms), music related to the folk tradition (I. Stravinsky), music depicting the sounds of nature” [5, p. 23]. On the one hand, music should be understandable and in tune with the soul of the child; on the other, it should carry new information and feelings for a stronger emotional effect.

In this case, it is important to select musical works in accordance with the inner sensations of the child, so that through a complete merger with the composer’s language, performing contact with the public is possible. According to the definition of E. Ryabinina, and we completely agree with her position, music therapy is based not so much on the acoustic impact, but on the potential of the psycho-aesthetic effect of music. “Of particular importance is musical communication, the capabilities of which are fully realized by such most common forms as live instrumental and vocal performance” [4, p. 210].

Music can also have a beneficial effect on the elimination of the child’s depressive states, which can be caused by the imbalance between the processes of nervous excitation and inhibition. S. Fadeeva notes that in such cases, “the goal of music therapy is to regulate the activity of the central nervous system: along with an increase in its activity to a certain level, the activity of the organism as a whole improves” [5, p. 16]. However, the process of influencing music on the nervous system is very complex. As noted by E. Ryabinina, music therapy cannot be reduced only to the organization of playing music and fixing the beneficial effects of this process on the well-being of a person. “The fundamental importance of the aesthetic qualities of music is connected, first of all, with its inherent ability to create strong, and therefore therapeutically effective, experiences. It is characteristic that in the treatment of post-traumatic stress disorders, the world leader among the options for the direction of musical therapy, not pleasant sounding fragments are used (like musical “relaxation”, where ordered sounds are not always music), but, more often, work with patients is carried out through their beloved music” [4, p. 207].

Musical material can have explicit programmability (in the form of headings, epigraphs, poems preceding the play (for example, in the cycle Tchaikovsky’s “Seasons”), paintings that inspired the image, etc.) and hidden (which is transmitted through the genre, style,

stylistics, composer program, tonality, etc.). In the case when the program is not prescribed, you can use a synthesis of arts (literature, poetry, painting, sculpture, cinema, etc.), which greatly enriches the imagination and enhances the perception of music.

Of particularly great help are the composer's comments, in which he reveals the features of musical works, the history of their creation, thoughts and feelings that accompanied the composer's process of creating these plays. It is such a material that significantly deepens the semantic and emotional perception of musical creativity [23]. The child's response to a piece of music, on the one hand, depends on the level of his or her emotional culture; on the other, from the value system embedded in it (ethical, spiritual, aesthetic, cultural, etc.). According to S. Fadeeva, music can become "a decisive factor in the development of the axiosphere of a child's personality, helping to cultivate value-semantic relations to oneself and the world" [5, p. 33].

The issues we have raised about the harmonizing and healing effects of music on a child's personality are particularly important in the professional training of future music art teachers for inclusive student's learning. Indeed, the generalizations we make allow us to select the necessary music material and distribute it into three groups according to the age categories of children (for the younger, middle and older age students) who require special educational services. For elementary school students, the material should be selected regarding two major semantic spheres – lyric and play, where light and harmonious, conflict-free atmosphere prevail. An example of the lyrical sphere are the following works: P. Tchaikovsky – "Mom", "Sweet Dream" ("Children's Album"); S. Prokofiev – Morning, ("Music for Children"); G. Sviridov – "Lullaby", "Gentle request", ("Children's Plays Album"); B. Filtz – "Doll Cradle" ("Yavoriv Toys"). Another, playing sphere, can be represented by such works as: P. Tchaikovsky – "Playing horses", "March of wooden soldiers" ("Children's album"); S. Prokofiev – "The Procession of grasshoppers" ("Music for Children"); G. Sviridov – "Hopper", ("Album of plays for children"); B. Filtz – "Hand-drawn nozzle", "Cuckoo" ("Yavoriv Toys").

For middle school-aged children, it is possible to offer works with a more diverse figurative sphere, but which also does not contain contrast-conflict comparisons. To reflect the lyrical figurative sphere you can use such works as: P. Tchaikovsky – "Morning Prayer", ("Children's Album"); R. Schumann – "Dreams"; S. Prokofiev – "Rain and Rainbow", "The Moon Walking over the Meadows" ("Music for Children"); G. Sviridov – "Music box", "Before bed", ("Album of plays for children"); B. Filtz – "Magic Bow", "Yavoriv's Box of Memories" ("Yavoriv Toys"). Another, playing sphere, can be represented by such works as: P. Tchaikovsky – "Waltz", "New doll", "Nanny's fairy tale" ("Children's album"); S. Prokofiev – "Walk" ("Music for Children"); G. Sviridov – "Rain", ("Album of plays for children"); B. Filtz – "Colorful fiddle", "Merry Horse" ("Yavoriv Toys").

For high school students, it is possible to use works both curricular and genre structured (preludes, saraband,

pavana, lullaby, etc.), taking into account the fact that children already have certain life and music experience. The following works can be suggested to depict the lyrical sphere: S. Rachmaninov – Preludes D-dur op.23, G-dur op.32; Musical moment Des-dur No.5; R. Schumann – Romance Fis-dur; K. Debussy – "Moonlight" ("Bergamas Suite"), prelude "Girl with flax-colored hair"; M. Ravel – "Pavana". Another, playing sphere, can be represented by the following works: M. Ravel – "Water game"; P. Tchaikovsky – "Horse Play" ("Children's Album"); S. Rachmaninov – Musical moment C-dur No.6; B. Filtz – "Horse-drawn cart" ("Yavoriv Toys"); G. Sasko – Blues, Ragtime ("Playing Jazz"), Jazz-Waltz.

In the process of inclusive education, it is necessary to take into account the characteristics of the child's psyche (either prone to affectation, or, on the contrary, prone to autism and isolation). In the first case, the musical repertoire should include both fairly vivid play pieces and lyrical ones. It is necessary to approach children with special care who are prone to autism, as they are very vulnerable and fragile, and musical works should not cause rejection. Among the criteria for the selection of composer works, we can name the following ones: conflict-free and harmonious images; the dominance of the major sphere; melodic tune and euphony (cantellation); lack of sharp-sounding modern harmonies and rhythms. The following works can be mentioned as examples of such pieces: J. Bach – Prelude F-dur (Volume 2 WTC), Aria from the "Goldberg of Variations", Aria from the orchestral suite No. 3, Bach-Gounod "Ave Maria"; V. Mozart – part 2 of the sonata G-dur No. 5; L. Beethoven – part 2 of Sonata No. 8 op. thirteen; F. Liszt – Consolation of Des-dur; F. Chopin – Nocturne Des-dur; C. Saint-Saens – The Swan; R. Schumann – Romance Fis-dur; S. Rachmaninov – Prelude G-dur; S. Prokofiev – Transience b-moll; V. Silvestrov – "Children's Music" 2.

Some of the sonatas by M. Clementi and V. Mozart, as well as dance pieces (for example, K. Debussy – "Golliwogg's cake walk" from the cycle "Children's Corner") can be offered as moving active games.

We offer the music material for future music art teachers to master at lessons in basic musical instrument in order to use them in inclusive classes in the process of musical perception. Students need to understand the inclusive potential of both instrumental and vocal music during their professional training. Therefore, in the vocal class, students, being trained for children's inclusive learning, should master teaching singing techniques aimed at establishing intellectual, emotional and physiological relationships, that is, to harmonize them. This is the developmental and corrective technique of teaching singing that can be used in inclusive classes of different age and gender children.

4.3 Technological bases of inclusive vocal training

The technique developed by us involves the education of students in inclusive classes, which were integrated into the first and second categories classes, according to N. Kvitka [14], since children of the third category need the professional help of psychologists. The purpose of

this technique is socialization, formation of musical culture, development and correction of psycho-physiology of children by means of vocal art. Developmental and corrective technique of singing training includes initial, basic and effective stages of application. At the *initial* stage, the content, the choice of forms and methods of teaching, corresponding to the educational needs of young, middle, and senior school students, are formed. At the *secondary* main one – the content of educational material, forms, methods, consequently, according to age are applied. At the *final* effective stage – students' educational achievements are revealed, the results of technique implementation are analyzed, positive and negative moments in its application are determined.

This technique is based on the principles of: harmonization, which ensures the interconnection of spiritual and physical, intellectual and emotional; nature correspondence, which provides education of the child according to his / her gender, age, individual intellectual and psycho-physiological characteristics; cultural responsibility, which ensures that in the process of vocal training the world and national cultures are taken into account; accessibility, which in the process of vocal training implies resistance to the existing level of development of students; systematic nature, which ensures systematic learning of the students' material; positivity, which involves creating a situation of success and a willingness to support children in the vocal learning process.

The content of this technique is the educational vocal repertoire, the selection of which depends on the degree of intellectual impairment, complex disorders of psycho-physiological development of children who are taught in an inclusive class, as well as their age characteristics. Thus, we have selected vocal works for the preparation of musical perception of children, especially for elementary school students: Ukrainian carols and shchedrivkas, M. Leontovich "Dudaryk", Y. Stepovy "Lullaby", M. Lysenko Fragments from the opera "The goat-dereza", K. Stetsenko from the opera "The Chanterelle, the Cat and the Cockerel", B Filtz fragments from the "Forest opera", the Neapolitan folk song "Santa Lucia" by V. Mozart "Longing for spring", J. Brahms "Lullaby", etc.; to perform folk songs and works of composers, which are filled with a bright, joyous outlook, have a playful and choreographic potential and do not contain dramatic conflicts, contrasting musical images. Such works, in particular, are: folk songs "Come out, get out, ladybug", "Shchedryk", "Hryts, Hryts, come to work", "Podolianochka", "Halya went around the garden", "Beautiful dance hopachok", "Oh, winter is over", "They lived at their grandmother's", "Gray cat", "Oh, there's rye on the hill, a bunny sits", etc.; children's songs by composers: M. Lysenko "Song of the Fox", V. Kosenko "Pastoral", V. Podvala "Musical riddles", A. Filipenko "Cheerful musician", "Chanterelle Took a Violin" and "Play with a teddy bear", B. Filtz "Bells Ringing", "We were in the woods", V. Vermenich "Grandfather Frost's Invitations" and others.

Mastering the content of students' musical training using the designated song repertoire should take place both in the form of lessons – in the lessons of music art,

and at the extracurricular time – on special vocational developmental and correction training sessions, where it is advisable to use group and collective forms for teaching children by means of art. We propose that in inclusive classes the offered works of music are to be introduced in music lessons, since the content of the programs available in the schools is instructive and educational, but not corrective. During extra-curricular activities, the teacher has more opportunities in the selection of vocal works, taking into account the individual characteristics of children.

Of particular importance in the successful implementation of our proposed technique are singing teaching methods developed by vocal educators, adapted for us to work with children with special educational needs, and the author's vocal development and vocal-correction methods. Having diagnosed and analyzed the cognitive and vocal abilities of children, it is important to choose appropriate teaching methods of singing and, if necessary, methods of social, intellectual, psycho-physiological correction.

Thus, during passing the main secondary stage of technique at the beginning of vocal training of inclusive class students in elementary school, it is important to systematically and gradually apply the methods that are preliminary to singing in the system of musical arts lessons and at special vocal trainings:

1) method of game "musician-actor", which is aimed at invoking the mimic-emotional reaction of students to the word, and then – to vocal music, in the combination of words and music. The essence of the method lies in the fact that children are called a word (adverb) and they must express it through facial mimics. It is important to use emotionally positive mood words as an example: gentle, joyful, lyrical, inspired, uplifting, dreamy, insightful, delicate, sensitive, and more. In the future, children are invited to respond to facial expressions by listening to a vocal work, identifying internally the emotions it evokes;

2) method of playing a game "musician-conductor", such a method is aimed at developing children's reaction to the rhythm of a musical work. Children should stand up, a vocal recording is played to them, and they must move their hands down, a conductor gesture, showing the strong beats of vocal music;

3) method of a game "conductor-actor", which is aimed at making students respond with gesture and facial expressions to the heard vocal music. Children listen to the vocal work on the record, get acquainted with it, and then stand up or sit down; they are played a recording of the work and they try through gestures and facial expressions to show what the music tells. Students who are able, if desired, can dance or move freely in singing. It is necessary to direct children's attention to the correspondence of movements and gestures to the essence of music;

4) method of "improviser-singer" and "composer-singer", which is aimed at developing children's creativity. Children are given a creative task to make some changes to the tune the teacher suggested and then to sing it. Further the tasks become more complicated: it is necessary to create the beginning, middle or final part of a melody, come up with a verbal text to it and then

sing it. A more complex task is to create a basic soundtrack to accompany a song using music computer programs;

5) articulation gymnastics (by V. Yemelyanov), which provides the opportunity to coordinate the work of the articulation apparatus with the help of such exercises [24, p. 161]: make a tongue circular motion between lips and teeth with the mouth closed in one direction and then in the opposite direction; rest your tongue on upper lip, lower lip, right cheek, left cheek; to tongue, changing the shape of the mouth, listening to different clicks and invite children to click equally, creating unison; raise the upper lip, exposing the gums and giving a smile; massage your face with your finger tips starting from the roots of the hair on the forehead down to the neck with a circular kneading movements; touch the face by tapping with the tips of bent fingers; put your index fingers on the nose and control the wrinkled nose; at the same time lift the muscles under the eyes and wrinkle the nose with wide open eyes and raised eyebrows; massage the jaw and jaw joints with your fingers. Such gymnastics should be held only under the teacher's supervision;

6) breathing exercises, which promote the development of the breathing apparatus mastery of the ability to calm the nervous state through the control of the singer's breathing. The practice of singing has gained considerable experience in the use of exercises for the development of singer's breathing. However, we do use some of them that, in our opinion, give an initial idea of the work of breathing in the singing process. The gymnastics includes a set of training methods:

– initial breathing exercises are aimed at awareness of the types of breathing: clavicular – undesirable, chest – possible, lower-rib-diaphragmatic – most comfortable in singing and three stages of singing breathing: inhalation, delay and exhalation (K. Linklater [25], S. Riggs [26]). Children are encouraged to stand up, with their hands put to their sides, to breathe in peacefully and to bring air into the upper part of the lungs to raise their shoulders, then imagine that they exhale a candle, hold their breath, exhale slowly (clavicular type). The next exercise – children inhale, filling the breast with air, hold, then exhale in the same way (breast type). Furthermore, the following exercise is trained – students inhale as if they are sighing, while inhaling they fill the lower part of the lungs to feel that a ball has formed from the air in the stomach part, hold it, and then exhale slowly. Students should be told that such a ball should be kept while singing. The exercises should repeat, setting a task for the students to compare which type of breathing allows more air in the lungs, and the exhalation is longer. If children find it difficult to master the lower-diaphragmatic type of breathing, they are invited to lie down and put their hands on the stomach to breathe so that their hands are lifted. And then, transfer the feeling to a standing position;

– the exercises referred to by the castrate singer Farinelli and then by Manuel Garcia [27], who suggested breathing in as slowly as possible for several seconds to develop breathing; exhale very slowly; keep lungs as full as possible; keep as empty as possible;

– the exercise that has a filtering and coordinating effect on the respiratory apparatus, using a simple wind

instrument – nozzle, harmonica, etc. Inhaling through the instrument, make a long sound out of the instrument, pulling up the stomach;

– the exercise that strengthens the muscles of the respiratory apparatus: hands should be placed onto the sides, breathe in deeply the air to fill the lower and middle part of the lungs, and then utter the voiceless consonants, such as “p”, “s”, “t”, “tʃ”, four times each, pushing the diaphragm closer to yourself;

– health-improving breathing exercises (by G. Strelnikova [28]), which should be used for diseases of the upper and lower respiratory tract, sound disorders, in particular: turn your head to the right and to the left, while doing short, noisy, quick breaths each time. Calm your breath down through your mouth. Tilt your head right and left, back and forth, inhaling sharply through your nose, exhale effortlessly. Then, turn your hands in front of your breasts in turns inhaling sharply and exhaling slowly. The exercise rate should be – 1 breath per 1 second;

– breathing exercises with sound, which are used at the completion of preparatory exercises for the development, coordination, healing of the respiratory system: using the lower-rib-diaphragmatic type of breathing slowly inhale, hold the breath, and at a comfortable pitch of the sound, sing in unison vowels “uh”, “oh” as long as possible; then gradually introduce simple exercises with syllables, words, poems instead of the sounds;

6) phonopedic exercises for making children aware of the process of sound formation (by V. Yemelyanov [24]), aimed at feeling the attack of sound: it is necessary to imagine as if you warm your hands in the cold, holding your palms at the mouth and warming them with breathing and making a sound “hhhhhh”, and then add the sound “a” to it, first at a comfortable pitch for children and then at a certain pitch defined by the teacher to get “hhhhhaaaa”; another exercise “Wave”, which enables students to imagine the motion of the wave, to understand the process of sound formation, the dynamics of sound, and involves the alternation of exhalation or strobass and vowel “a” with the strengthening of the dynamics, which looks like: hhh HHHH HHHH; an exercise for the awareness of the boundaries of the voice range and the ability to switch from register to register: sing the lowest note of the voice on the vowel “ah”, using portamento (from Italian – sliding), move the voice to the highest note on the vowel “uh”;

7) phonetic exercises are used in working with children who have speech disorders, they are based on the diagnosis of sound detection with each child or syllables that sound most casual. In the sound production of such sounds the voice apparatus is free. As evidenced by scientific and methodological researches (D. Ogorodnov [29], A. Yakovlev [27]), most often, the most convenient sound for children is the loud “uh”, which makes it possible to naturally coordinate the work of the singing apparatus. At the beginning of the work, the exercises should be performed with the vowel “uh” on one sound, using the strokes legato, non legato, staccato, then – reflecting the sound of the cuckoo, in the distance, the designated vowel should be accompanied with other sounds to the singing trying to preserve its previous sensations.

These exercises create a solid basis for mastering vocal repertoire by children. The skill of a music teacher to work with students in vocal training using group and collective forms that facilitate their artistic communication and personal communication is crucial. Therefore, mastering the content, forms and methods of children's inclusive learning by the students requires constant self-improvement and the search for new musical works, forms, methods of vocal practice with students.

For future music teachers, it is also important to master the ability to analyze the learning outcomes, identify the positive and negative points in applying it; try to carry out diagnostics and control for identification of pupils' educational achievements, results of developmental and corrective work, which is the final effective stage of the technique.

According to the results of the study, we conducted a pedagogical experiment in 2018–2019, engaging 36 students from the Arts Department of Kryvyi Rih State Pedagogical University along with 24 students from inclusive classes in general secondary educational institutions in Kryvyi Rih. All of the participants were divided into 2 groups: an experimental group, made up of 17 people and a control group – 19 people.

We conducted a students' survey to determine their own level of professional competence in inclusive education, which showed that: 84% of future teachers of the experimental group and 82% of the control one are not ready for inclusive learning activities; 12% of students in the experimental group and 14% of the control group are not fully confident in their knowledge and skills to teach children in inclusive classes; only 4% of students in the experimental group and 4% of the control group feel ready for this activity.

Subsequently, educational material for educational artistic inclusion was introduced into the educational process of the experimental group and the vocal class: specially selected pieces of music with accompanying didactic material in the main musical instrument class; developmental-correcting technique of singing teaching in vocal class. The control group students did not study the innovative material. Future music art teachers applied their knowledge and skills in the teaching practice, for six academic weeks, with 24 students enrolled in inclusive general secondary education classes.

At the end of pedagogical practice, another survey was conducted, which revealed that: 22% of future teachers of the experimental group and 80% of the control are not ready for inclusive educational activity; 14% of students in the experimental group and 16% of the control group are not fully confident in their knowledge and skills to teach children in inclusive classes; 64% of the students in the experimental group and 4% of the control group feel ready for this activity. The results of the experimental study are shown in Table 1.

The experiment showed a significant increase in the level of future teachers' readiness with high and medium levels of readiness for inclusive learning and a significant decrease in students with low levels of readiness for inclusive learning. Whereas the level of

students' readiness of the control group has hardly changed.

Table 1. Dynamics of readiness levels of future music art teachers for children's inclusive learning

Levels	groups		groups		change criteria	
	initial stage of experiment		final stage of experiment		experimental	control
	experimental	control	experimental	control		
Low (non-developed)	0,84	0,82	0,22	0,80	-62	-2
Medium and high (developed)	0,16	0,18	0,78	0,20	+62	+2

The students of the experimental group revealed an rise in children's interest in music and after-school extracurricular lessons, an increase in students' academic progress, an improvement in children's communication skills, and a good mood due to the perceived music and singing lessons.

5. Conclusions

1. Based on the results of the theoretical analysis, it is determined that professional training of future music art teachers for inclusive education is an educational process aimed at ensuring students' readiness to master the basics of inclusive learning, as well as competences designated to apply music-pedagogical knowledge and skills into the process of inclusive learning.
2. The criteria for the selection of musical works for children in need of special educational services are revealed: non-conflict, harmony of images, dominance of the major sphere, melodic tune and gentle sounding, cantillation, the absence of sharp modern harmonies and rhythms.
3. The developmental and corrective technique of singing training for children with different educational needs is substantiated, which includes the innovative content of children's education – specially selected vocal repertoire; lesson and extracurricular forms of training; specific methods of teaching children.
4. It has been experimentally proved that the level of future music art teachers' readiness for inclusive learning in the experimental group is much higher than that of the control group students'.

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