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Original Article

Creative pedagogical methods for fostering tolerance and empathy in music education: A comparative study of vocalists and instrumentalists

Métodos pedagógicos creativos para fomentar la tolerancia y la empatía en la educación musical: un estudio comparativo entre vocalistas e instrumentistas

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Abstract

This study aims to evaluate the effectiveness of creative teaching methods in developing empathy and tolerance in music students. Methods included functional analysis, analytical-synthetic approaches, the Mayer–Salovey–Caruso Emotional Intelligence test, the Cultural Intelligence Scale, Likert scales, the Wilcoxon criterion, and the Cohen coefficient. Findings indicate that tolerance supports the perception of musical styles, high-quality group performance, and intercultural and professional ethical competence, while empathy enhances emotional perception and expressive performance. Creative methods such as interactive music platforms, intercultural techniques, musical improvisation, game-based learning, musical discussions, and empathic reconstruction proved effective. Group No. 1 (vocal) showed high group performance and cognitive tolerance development, while Group No. 2 (instrumental) excelled in individual performance and metacognitive tolerance. The study highlights the practical significance of creative approaches for cultivating empathy and tolerance in musician training.

Keywords: intercultural competence, musical skills, non-standard teaching approaches, professional competence, psychological readiness.

Resumen

Este estudio tiene como objetivo evaluar la efectividad de los métodos de enseñanza creativos en el desarrollo de la empatía y la tolerancia en estudiantes de música. Los métodos utilizados incluyeron análisis funcional, enfoques analítico-sintéticos, la prueba de Inteligencia Emocional Mayer–Salovey–Caruso, la Escala de Inteligencia Cultural, escalas Likert, el criterio de Wilcoxon y el coeficiente de Cohen. Los resultados indican que la tolerancia favorece la percepción de estilos musicales, el desempeño grupal de alta calidad y la competencia ética intercultural y profesional, mientras que la empatía mejora la percepción emocional y la interpretación expresiva. Métodos creativos como plataformas musicales interactivas, técnicas interculturales, improvisación musical, aprendizaje basado en juegos, discusiones musicales y reconstrucción empática demostraron ser efectivos. El Grupo No. 1 (vocal) destacó en desempeño grupal y desarrollo cognitivo de la tolerancia, mientras que el Grupo No. 2 (instrumental) sobresalió en desempeño individual y tolerancia metacognitiva. El estudio resalta la importancia práctica de los enfoques creativos para cultivar empatía y tolerancia en la formación de músicos.

Palabras clave: competencia intercultural, competencias musicales, enfoques de enseñanza no estándar, competencia profesional, preparación psicológica.

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Introduction

The transformation of the classical education system is focused on improving students' ability to memorize information and developing their initiative. Acquiring these skills allows students to perceive educational materials through analysis, solve non-standard professional problems, and develop tolerance and empathy. Tolerance and empathy skills are necessary for successful learning during group work and interaction with the teacher. These skills also influence the perception of the emotionality and depth of music and its cultural characteristics. Rethinking teaching strategies influences the growth of professional skills and adherence to social ethics, as confirmed by recent studies (Cronenberg et al., 2023; Goffi-Fynn, 2024).

Creative teaching methods, which are advanced methods of developing professional skills and actively and experimentally engaging students, influence the development of creative thinking and imagination (Chen, 2024; de Abreu, 2025; Humberstone et al., 2024). In the training of musicians, this process contributes to the implementation of creative projects and the emotional perception of music, relying on cognitive skills. The choice of non-standard teaching methods influences students' choice of new methods for reproducing musical ideas.

Despite the advantages of creative methods for teaching and developing tolerance and empathy in students, this approach also has a negative impact (Brandel et al., 2024; Sitanggang et al., 2025). The negative effect is reflected in the workload of students as a result of searching for approaches to constant self-expression. During group interaction, creative approaches can lead to a decrease in tolerance towards students who are more closed and do not show activity when solving creative tasks, which is reflected in a decrease in self-esteem. Reducing the negative impact of creative methods and gradually developing tolerance and empathy in the learning process is possible by changing the intensity of learning and ensuring that tasks are distributed evenly among all students.

However, the consideration of creative methods for involvement in the educational process is primarily associated with an emphasis on acquiring only specialized skills or exclusively psychological resilience. The relationship between the use of creative methods for assessing the development of tolerance and empathy in the educational process has not been sufficiently researched. The aim of this work is to identify the advantages of creative educational approaches for developing empathy and tolerance skills in students. Research hypothesis: mastering tolerance and empathy in future musicians through creative educational approaches contributes to the improvement of musical skills.

Literature Review

The conceptual basis is based on the praxis philosophy of music education developed by Elliott (2000). Within this approach, music is viewed not as an autonomous aesthetic object, but as an activity immersed in a social and cultural context. Music education is interpreted as a process of active participation in "musical practice" that combines cognitive, emotional, and ethical dimensions. Elliott emphasizes that affect and musical understanding are formed through the experience of collaboration, listening, and reflection. This interpretation allows us to justify the connection between the development of empathy, tolerance, and the quality of musical performance, since musical competence emerges as an integrated characteristic of professional and social interaction.

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The transformation of the educational process is the subject of contemporary scientific research focused on the formation of professional rules of conduct and tolerant attitudes toward other students. The studies indicate the need to develop tolerance and empathy in students to improve their professional skills (Palazzolo, 2024; Zhongsheng, 2025). The need to introduce non-standard teaching approaches that promote change in traditional education and are focused on personal development is discussed in the works of Wan (2023). Wan (2023) notes that the use of non-standard teaching approaches in music education influences the improvement of creative thinking. Creativity skills influence more effective group musical interpretation as a result of adaptation to the performance methods of other musicians (Wan, 2023).

The concept of “musicking” proposed by Small (1998) is of significant theoretical importance. The author expands the understanding of music as a process of interaction in which meaning is created not only during performance, but also in shared listening and communication between participants. The musical experience emerges as a social act that reflects the system of relationships between people, cultures, and values. In this context, tolerance and empathy are not additional psychological qualities, but rather internal conditions for productive “musicking.”

The impact of non-standard teaching strategies on improving tolerance and empathy in professional training is discussed in studies by Davila-Barrio et al. (2023); Corral et al. (2023); Fernández (2024). The development of empathy in the educational process contributes to the social development of students, which is reflected in the quality of musical interpretation in groups. The emphasis on developing empathy contributes to improving the musical experience through joint projects with other students and the exchange of knowledge (Davila-Barrio et al., 2023). A tolerant attitude towards students and the exchange of experience contributes to the understanding of artistic ways of expressing music, which promotes creative performance (Corral et al., 2023). A study by Fernández (2024) indicates that creative methods promote the study of different music, which allows the generation of musical textures to create new sounds for compositions.

Methodological guidelines for the pedagogical implementation of these ideas are contained in Swanwick (2008), where music education is defined as a process of holistic immersion in artistic content. Swanwick emphasizes the importance of balance between technical training, creative interpretation, and personal reflection. The development of musicality is linked to the ability of students to comprehend the structure of a piece, its intonational features, and the cultural context of its creation. Therefore, the formation of empathy and tolerance can be seen as part of a pedagogical strategy aimed at a deep understanding of musical content and the conscious acceptance of different performance positions.

The study by Chang et al. (2022) found that the formation of tolerance and empathy promotes focused learning. Such learning promotes the combination of interdisciplinary approaches, which stimulates original thinking. Author Cain (2023) notes that developed empathy allows for more accurate transmission of experiences through musical works, which influences creative and improvisational self-expression.

A separate segment of scientific works is aimed at fostering empathy and tolerance in future musicians with the help of digital tools (Ruan, 2024; Wen, 2024). In particular, Ruan (2024) notes that professional interactive music programs motivate students to better understand music. The Soft Mozart application promotes comprehensive individual and group music training, which ensures an increase in

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professional competence. Wen (2024) notes that interactive online technologies allow for a change in the approach to learning, which contributes to the formation of tolerance and the solution of professional tasks using creative approaches.

Analysis of scientific works has made it possible to determine the importance of original educational strategies for the holistic formation of students' personalities. The characteristics of tolerance and empathy are considered superficially from a psychological point of view due to the use of non-standard educational practices. Little-studied aspects include the use of optimal original strategies that influence tolerance and empathy in future musicians of various genres (vocalists and instrumentalists).

Methodology

The study used general theoretical and experimental methods. General theoretical methods, which included functional-analytical and analytical-synthetic approaches, helped to determine the need to develop tolerance and empathy in future musicians and to identify creative teaching mechanisms for generating these competencies. Such methodological tools influenced the understanding of the specifics of training, professional practice of musicians, and signs of tolerance and empathy. The theoretical materials obtained were combined to form a holistic view of creative teaching methods. The experimental fragment was made possible by 28 musicians who were divided into two groups. The area of specialization became the basis for the creation of two groups of students. Group No. 1 included 14 students who studied vocal performance (pop and jazz). Group No. 2 included 14 students who acquired skills in playing musical instruments (piano, guitar, saxophone). Future musicians were trained in their second year. The emphasis on second-year students was due to their ability to adapt to the volume of educational materials. The total training period lasted 15 weeks. The research sample was formed on the basis of convenience sampling, as students from one educational institution who were in their second year of study and agreed to participate in the pedagogical experiment were involved. This approach was determined by organizational capabilities and the specifics of the educational process.

Empathy in future musicians before and after training was assessed using the Mayer–Salovey–Caruso Emotional Intelligence Test (further – MSCEIT) (Sambol et al., 2025). The MSCEIT criteria for assessing empathy were the degree to which students assimilated emotions when interacting with other students and in musical works (understanding the idea of a musical work); understanding the emotionality of musical works depending on their complexity (the specifics of musical interpretation depending on the genre, cultural diversity, etc.); the ability to reflect emotional signals (nonverbal communication between students). The Cultural Intelligence Scale (further – CIS) was used to analyze the degree of tolerance in future musicians (Widodo, 2024). The CIS includes cognitive (understanding the characteristics of other musical cultures), motivational (developing student interest), behavioral (responding to external factors), and metacognitive (understanding the characteristics of different music) aspects. Tolerance and empathy on the CIS scale and the MSCEIT methodology were assessed by seven teachers while observing students during the learning process. During the observation, R. Likert's scale was used, which allowed, with the help of 5 points, to set a scale of mastery of tolerance and empathy skills in students (Memmedova & Ertuna, 2024). Students achieving a score of 5 points corresponded to a high level of development. Appendix A provides indicators of the degree of tolerance and empathy for each student. The indicator of musical performance was established using a 10-point scale. Appendix B shows the

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individual indicators for each student. Statistical calculations using Wilcoxon's F criterion (Siegel & Castellan, 1988) were used to compare the indicators of tolerance and emotionality development.

$$W = min\left(\left(\sum_{d_i>0} X_{after,i} - X_{before,i}\right)^{+}, \left(\sum_{d_i<0} X_{after,i} - X_{before,i}\right)^{-}\right), \quad (1)$$

where $X_{before,i}$ – rank value before the student completes the training; $X_{after,i}$ – rank value after the student has completed the training.

A significant difference between student performance before and after the study will be observed when the value $W \leq W_{kr}$ is achieved. Since 14 students participated in each of the two groups, the threshold value of Wilcoxon's criterion was 21.

The comparison of the musical performance abilities of students in groups 1 and 2 using the acquired skills of tolerance and empathy was carried out using the P. Cohen coefficient (Cohen, 1988):

$$d = \frac{\overline{X}_{after} - \overline{X}_{before}}{s_d}, \quad (2)$$

where $\overline{X}_{after}, \overline{X}_{before}$ – averaged values of student performance after and before the use of creative teaching methods ($\overline{X}_{after} - \overline{X}_{before} = \overline{d}$); s_d – standard deviation.

To account for the large size of the effect, it is worth considering that the calculated value should be greater than 0.8; for a medium effect, from 0.5 to 0.8; for a minor effect, less than 0.4.

Results

The educational process should include both the improvement of musical abilities and tolerance and empathy, which are interrelated with creative competence and intelligence. Previous studies have shown that students need to have tolerance and empathy skills in order to perceive the opinions of other students, especially in the process of collaborative work (Powers, 2025; Rastruba et al., 2025). Tolerance and empathy influence the awareness of responsibility for one's own actions and statements, which contributes to a positive atmosphere among students. Other studies focus on the need to develop tolerance and empathy in future musicians (Cholifah, 2024; Behrens, 2025). This has a positive effect on group musical interpretation, allowing musical interpretation methods to be adapted to different musicians. In studies (Canham, 2023; Setiawan et al., 2024), the development of tolerance is associated with an understanding of the importance of reproducing cultural specificity and the composer's intention in musical works. Based on the data from previous scientific works, an idea of the importance of tolerance and empathy skills in future musicians is formed. Figure 1 examines the characteristics of the formation of professional skills in musicians depending on indicators of tolerance and empathy.

Skills of tolerance and empathy broaden individuality in musical performance and promote quality interaction with other students. Thus, a conscious perception of musical works and their connection with national traditions is formed. During performance, this allows for the preservation of constructive technical methods of performance, combining them with cultural characteristics. Collective performance becomes more synchronized and focused on expressiveness, determined by the perception of signals from other group members (glances, gestures) for tempo

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performance. Tolerance skills influence the search for ways to perform well, rather than reflecting one's own stereotypes, which impair the dynamics of performance.

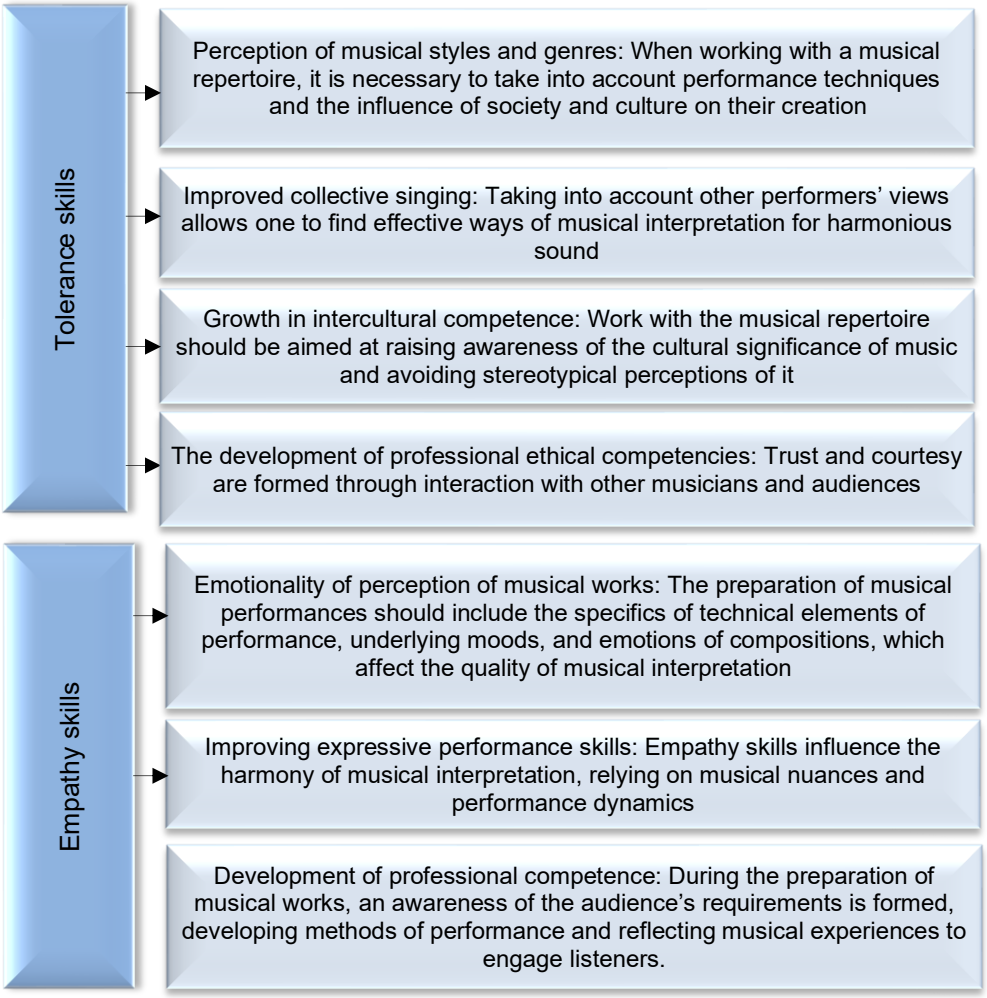

Figure 1. Assessment of the need to develop tolerance and empathy in future musicians.

Source: developed by the authors based on materials (Canham, 2023; Cholifah, 2024; Setiawan et al., 2024; Behrens, 2025; Powers, 2025; Rastruba et al., 2025).

Recent studies have focused on developing tolerance and empathy in students by changing traditional educational strategies (Yao & Li, 2023; Ambrose et al., 2025; Wang, 2025). Their development through non-standard approaches in teaching occurs through student communication, which is reflected in the perception of students' musical improvisations (tolerance) and the establishment of relationships with other performers (empathy). The works Guo et al. (2024); Tan (2025) indicate that it is the creative approach that allows for higher results. The emphasis on student self-expression allows them to value the opinions of others by avoiding a critical approach. Table 1 lists creative methods that can be used in the educational process of future musicians to develop tolerance and empathy.

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Table 1.
Creative teaching methods for developing empathy and tolerance in future musicians

Creative method	Features of use in music education	Specificity of the impact on the development of empathy and tolerance
Using interactive music platforms	Can contribute to the formation of individual and group musical performance skills	Expanding ways of perceiving musical information and alternative ways of interpreting compositions
Intercultural method	A combination of musical works of different styles and genres	Building respect for different musical cultures
Creating musical improvisations	Promote in-depth study of music (individually or in groups) to form an extraordinary sound	Developing emotional sensitivity and respect for other musicians
Game format	Can be used to implement individual musical roles or create competitions between different groups of musicians	Developing emotional experience and accepting other ways of performing
The method of musical discussions	Focused on in-depth understanding of topics	Developing goodwill towards others and the thoughts they reflect
Empathic reconstruction method	Emphasis on developing the emotionality of musical performance	Formation of emotional sensitivity and perception of cultural features of music

Source: developed by the authors based on materials (Yao & Li, 2023; Guo et al., 2024; Ambrose et al., 2025; Wang, 2025)

Creative teaching methods are more focused on students' self-expression, which changes the role of the teacher to that of a mentor who promotes students' self-expression. Interaction with other musicians based on tolerance and empathy skills influences the ability to subtly perceive musical emotions for constructive performance. These skills promote musicians' openness to other cultures, expanding their creative potential.

Ensuring the educational process for 28 musicians involved the use of all the creative approaches listed in Table 1 in the educational process. The sample was taken from 14 vocal students (group No. 1) and 14 instrumental students (group No. 2) who were in their second year of study at. The selection of second-year students was justified by the stability of the educational process and the initial stage of forming the individuality of musical performance and the development of professional ethics. To improve theoretical and practical training, the interactive music platform MusicTrainer 2.0 was used, which allowed students from both groups to focus on methods of vocal and instrumental performance, taking into account intonational and rhythmic features. The Mayer–Salovey–Caruso Emotional Intelligence Test (Sambol et al., 2025) was used to assess the empathy skills of future musicians. The use of the MSCEIT methodology made it possible to assess the level of emotions perceived by students (during interaction with other students and in musical works); understanding of the emotionality of musical works depending on their complexity; the ability to convey emotional signals. Tolerance was assessed using the Cultural Intelligence Scale (Widodo, 2024). In accordance with the methodology, the criteria for assessing tolerance were cognitive, motivational, behavioral, and metacognitive. The assessment of the formed tolerance and empathy was determined in the conditions of a pedagogical

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experiment, which, with the help of the creative methods used, helped to determine the change in these skills using the observation method. The observation process by seven teachers involved assigning scores to students according to the Likert scale, where 5 points corresponded to a high level of manifestation of a particular skill, and 1 point corresponded to a low level. A statistical comparison of the results was obtained using Wilcoxon's criterion, which reflects the ratio of students' results before and after the study when the calculated value (W) exceeds the critical value (W_{crit}). The results of each student before and after the study are presented in Appendix A (Table 2).

Table 2.
Assessment of the level of tolerance and empathy in students of both groups before and after the study

Advanced skills	Group No. 1					Group No. 2				
	To the use of creative approaches, the score	After using creative approaches, the score	IN	IN_{Crete}	r	To the use of creative approaches	After using creative approaches	IN	IN_{Crete}	r
Tolerance skills assessment:										
Cognitive aspect	3	4,6	0,0002	21	<0,001	2,9	4,5	0,0002	21	<0,001
Motivational aspect	3	4,4	0,0001	21	<0,001	2,6	4,4	0,0001	21	<0,001
Behavioral aspect	3,3	4,4	0,0001	21	<0,001	2,7	4,3	0,0001	21	<0,001
Metacognitive aspect	2,6	4,5	0,0003	21	<0,001	2,8	4,8	0,0004	21	<0,001
Empathy skills assessment:										
The level of emotions perceived by students during interactions with other students	2,6	4,8	0,0003	21	<0,001	2,4	4,6	0,0002	21	<0,001
The level of emotions perceived by students in musical works	2,5	4,6	0,0002	21	<0,001	2,1	4,8	0,0004	21	<0,001
Understanding the emotionality of musical pieces depending on their complexity	2,4	4,4	0,0001	21	<0,001	2,0	4,6	0,0002	21	<0,001
Ability to transmit emotional signals	2,2	4,5	0,0002	21	<0,001	1,9	4,5	0,0002	21	<0,001

Source: developed by the authors based on student performance

The assessment of empathy skills among future vocalists and instrumentalists showed improvement, which was reflected in their interaction with other students and in their perception of musical works. After using creative teaching methods, students in group 2 developed empathy skills in interacting with other students (4.8 points) and perceiving emotions in musical works (4.6 points) at almost the same level. Interaction with other students was reflected in the perception of different ways of emotional perception of compositions and reproduction of emotions during group performance. Students in group #1 were better able to develop skills for conveying emotional signals (4.5 points), which allowed them to engage in dialogue with other students during group performances.

The level of tolerance of students was also increased in groups 1 and 2 with the help of creative teaching methods. Students in group No. 1 were able to develop cognitive skills (4.6 points) and metacognitive skills (4.5 points) at the highest level, which allowed them to perceive not only the characteristics of music from other cultures,

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but also to navigate existing differences. The development of motivation (4.4 points) and behavioral skills (4.3 points) in students of group No. 2 was associated with the formation of high-quality performance of songs in interaction with other students, which was reflected in the consideration of the expressiveness of songs, styles, and artistic features. A comparison of the level of empathy and tolerance in future musicians before and after the use of creative teaching approaches using Wilcoxon's criterion showed an improvement in student results.

During the study, it was experimentally established how the development of tolerance and empathy in students affected the quality of musical performance. Attention was paid to the peculiarities of musical interpretation in groups and individually. Grades were given on a 10-point scale by seven teachers who participated in the educational process using creative methods. Thus, scores of 8-10 corresponded to a high level of performance, which included the accuracy of performance technique and emotionality of sound. Scores from 4 to 7 corresponded to an average level, which allowed for up to 4 mistakes in musical performance. To compare the performance of future musicians before and after the use of creative teaching approaches, the P. Cohen coefficient was used. The performance data for all students is presented in Appendix B. The results are shown in Figure 2-3 and Table 3.

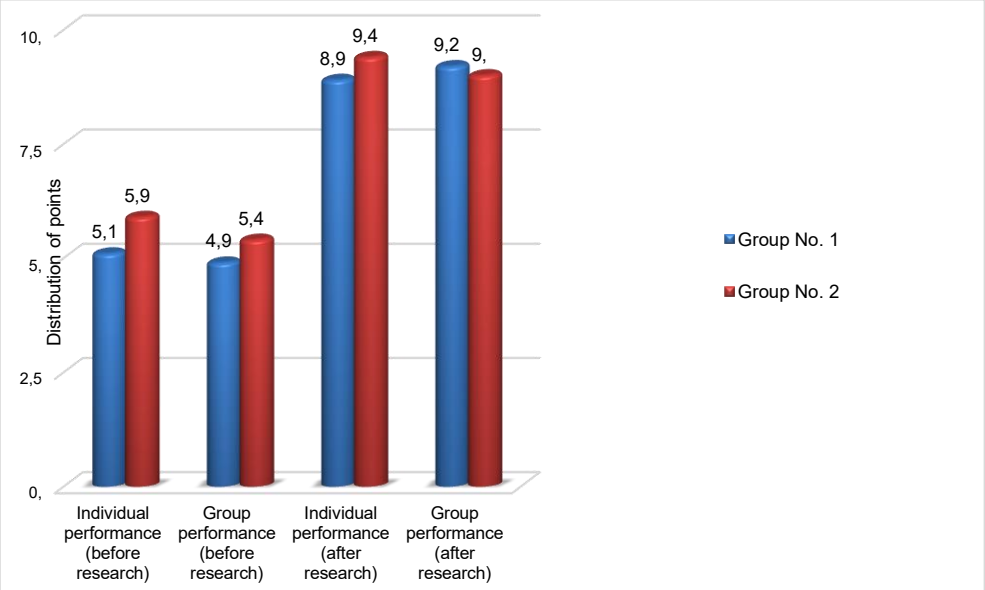

Figure 2. Quality of musical performance by students in groups 1 and 2 before and after training in the study conditions.
Source: developed by the authors.

The highest quality of individual musical performance was observed among students in group No. 2 (9.4 points), which was associated with understanding the content of the works and accepting their style. This influenced the quality of sound modeling, which excluded stereotypical performance depending on the musical style. Students in group No. 1 (9.2 points) showed higher results in group vocal performance, which is associated with the establishment of social connections between students to take into account the emotionality of the performance.

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Table 3.
Comparison of student performance before and after the study within the same group using the Cohen's coefficient

Method of execution	Cohen's coefficient		
	$\overline{d}$	s_d	d
Group No. 1			
Individual execution	3,86	1,62	2,38
Group performance	4,36	1,48	2,95
Group No. 2			
Individual execution	3,5	1,09	3,21
Group performance	3,57	1,69	2,11

Source: developed by the authors based on student performance

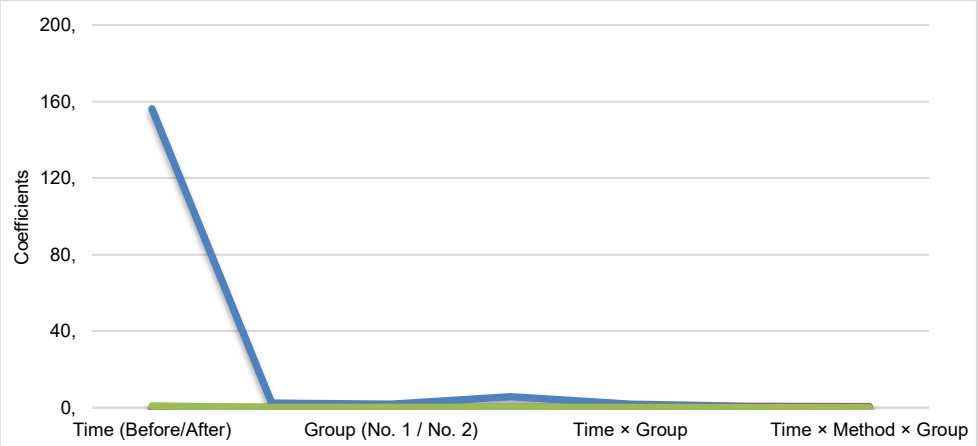

Figure 3. Assessment of the impact of indicators on the quality of musical performance in the context of multifactorial modeling.
Source: developed by the authors.

Based on a three-dimensional multifactorial model, it is evident that the duration of training had the greatest impact on student performance. This is due to the emphasis on developing tolerance and empathy, which allowed for more precise performance of musical works. It was established that the difference between individual and group performance was not significant. Similar data were obtained between vocal and instrumental groups of students. The interaction of other indicators is statistically insignificant.

Discussion

The results confirm the positive impact of creative teaching methods on the development of empathy, tolerance, and musical skills. However, the main point is not the increase in indicators themselves, but their structural differences between groups. It is this difference that requires a theoretical explanation. Elliott (2000) allows us to interpret the results through the active nature of music education. The author considers music education as a practice in which thinking, emotion, and action form a single system. Our data are consistent with this concept, as the development of empathy and tolerance occurred simultaneously with the improvement of performance skills. However, the results expand the praxial approach, demonstrating that the nature of the activity determines the type of cognitive regulation that dominates the process of professional development.

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Vocalists show a clear increase in the cognitive aspect of tolerance. This is natural. Vocal practice involves analyzing the text, linguistic intonation, and cultural context of a piece. Small (1998) interprets music-making as a form of social interaction in which meaning is created through the exchange of meaning. Vocalists work with words, and words require interpretation. Thus, the acceptance of another musical tradition is formed through intellectual understanding of its content. Swanwick, (2008) emphasizes the importance of structural analysis of music for the development of musicality. In vocal training, this analysis is verbal-semantic in nature, which explains the dominance of the cognitive dimension. Authors Ranczakowska & Kuznetsova-Bogdanovitsh (2025) note that the development of tolerance and empathy in students contributes to their focus on solving complex professional, social, and cultural situations. Unlike previous studies, the results of our work reflect specific criteria for the development of empathy (the level of perception of emotions when interacting with other students; understanding the emotionality of musical works; the ability to convey musical signals) and tolerance (cognitive, motivational, behavioral, and meta-cognitive aspects) in future musicians. It was found that vocal students were primarily able to perception of emotions during interaction with other students (4.8 points). In students of group No. 2, the development of metacognitive skills (4.8 points) and perception of emotions through musical works (4.8 points) were primarily manifested.

Instrumentalists demonstrated the predominance of the metacognitive aspect. Their training is focused on technical accuracy, coordination, control of dynamics and timbre. Constant self-monitoring of the performance process forms mechanisms of reflective regulation. Thus, tolerance manifests itself not through primary analysis of content, but through the ability to adjust one's own strategies for action. This conclusion clarifies the position of Zhang (2025), who links emotional sensitivity to professional development but does not differentiate it according to the type of musical activity. The results also correlate with the data of Cui (2022) and Yang (2025) on the effectiveness of non-standard and digital approaches. However, unlike these works, which focus on technical progress, our study demonstrates their impact on socio-cognitive mechanisms.

The novelty lies in identifying different trajectories of tolerance development depending on specialization. The contribution to the discourse lies in clarifying the relationship between the type of musical activity and the dominant type of cognitive regulation. The practical conclusion is obvious. Educational programs should take into account the specifics of the training profile and purposefully develop both cognitive and metacognitive components of professional competence.

Conclusions

The results of the study showed that empathy and tolerance in future musicians can be developed using creative teaching methods. The novelty of the work boils down to achieving high-quality individual and group musical performance as a result of developing empathy and tolerance skills in future musicians using creative methods. It has been determined that tolerance skills allow for the perception of musical styles and genres, influence collective song performance, and increase intercultural competence and professional ethical competence. Empathy skills are reflected in the emotional perception of musical works, their expressive performance, and the formation of professional competence. After 15 weeks of training using the MSCEIT methodology, it was found that the tolerance skills formed in future vocalists (group No. 1) were cognitive skills; in future instrumentalists (group No. 2) – metacognitive skills. With their help, students were able to focus on the characteristics of musical works and their cultural significance. The use of the CIS

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scale made it possible to assess the development of empathy in students. It was found that students in both groups had developed skills in perceiving emotions during interaction with other students and through the perception of musical works. Students in group 1 were able to achieve high-quality group performance of musical works, while group 2 achieved high-quality individual performance. The limitations of the study are related to the absence of students with beginner and advanced musical skills. However, these limitations were not significant, as the study focused separately on vocal and instrumental students. Future research may include a detailed analysis of different musical genres to evaluate creative teaching methods and the development of tolerance and empathy skills.

Prospects for further research require greater specificity and methodological clarity. It is advisable to expand the sample by including students from different courses and several educational institutions, which will allow testing the stability of the identified differences between vocal and instrumental training. Special attention should be paid to the inclusion of a control group without the introduction of creative methods to establish cause-and-effect relationships. It is worth applying a longitudinal design with repeated measurements over several semesters to track the dynamics of the formation of cognitive and metacognitive components of tolerance. A promising approach is to combine psychometric instruments with neuropsychological or behavioral assessment methods. It is also advisable to analyze the influence of genre specificity of repertoire and the intensity of ensemble practice on the development of empathy. This approach will deepen our understanding of the mechanisms that determine the differentiated trajectories of musicians' professional development.

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