UTILISING MUSIC AND ART FOR EDUCATIONAL IMPACT AND HOLISTIC PERSONAL GROWTH

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SUMMARY. The educational sector actively uses arts and music because these disciplines help develop students' emotional health, creativity, and social aptitude. Studying these concepts becomes more important because students face rising stress levels while technology creates new educational possibilities. The present research evaluates how art programmes affect student psycho-emotional wellness, social adjustment, and personal competence formation. The research design integrates quantitative and qualitative approaches that employ questionnaires, pedagogical experiments, structured observations, and content analysis. The study reveals how the educational implementation of painting and music creates important benefits by lowering student anxiety while fostering emotional competence and enhancing conversational abilities. Results indicate that music education programmes providing emotional healthcare within comfortable learning spaces show the most effective outcomes. Interactive art classes also contributed to developing cooperation and interpersonal communication skills. The practical significance of the work lies in the possibility of adapting art programmes to different educational

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contexts and using the latest technologies to optimise them. Further research can be aimed at studying the long-term impact of art programmes, their integration with digital technologies, and the development of innovative pedagogical approaches aimed at harmonious personal development.

Keywords: music, art, educational process, emotional intelligence, psycho-emotional state, creativity, art integration, pedagogical influence

Introduction

Art and music have long played an important role in shaping individuals' cultural, emotional and intellectual development. In today's world, where the number of stress factors is growing, integrating artistic practices into the educational process is becoming increasingly important. It helps students adapt to rapid changes in society and contributes to the development of creativity, emotional intelligence and interpersonal skills. The problem lies in the lack of understanding of how arts programmes affect the psycho-emotional state of students and how they can be optimally integrated into the educational environment. Scientific research confirms the importance of art in forming a harmoniously developed personality. For example, Ruokon[6] emphasises the importance of art in developing emotional resilience and creativity in early childhood education. Barton and Burke[7] focus on the positive impact of arts programmes on participants' social cohesion and emotional well-being. At the same time, Yang[8] demonstrates the effectiveness of virtual reality in music education in reducing stress and anxiety. However, much of the work focuses on specific aspects of artistic influence, while the comprehensive integration of art into the educational process remains insufficiently researched. Among the unresolved issues is the lack of data on the long-term impact of arts programmes on students. In addition, the question of how modern technologies, such as artificial intelligence and virtual reality, can enhance the effectiveness of artistic practices remains open. Studying these aspects is key to creating innovative pedagogical approaches that meet the challenges of modern society.

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6 Ruokonen, I. "Promoting Participatory Learning and Creative Thinking in Finnish ECEC - A Review of Five Arts Pedagogical Case Studies." In Harju-Luukkainen, H., Kangas, J., and Garvis, S. (Eds.), Finnish Early Childhood Education and Care. Early Childhood Research and Education: An Inter- theoretical Focus (Vol. 1). Springer, Cham, 2022, pp. 119-135. https://doi.org/10.1007/978-3-030-95512-0_9

7 Barton, G., and Burke, K. "Aesthetic positive pedagogy explained." In Aesthetic Positive Pedagogy. Palgrave Macmillan, Cham, 2024, pp. 45-60. https://doi.org/10.1007/978-3-031-50829-5_2

8 Yang, P. "Virtual Reality Tools to Support Music Students to Cope with Anxiety and Overcome Stress." Education and Information Technologies, vol. 29, 2024, pp. 16525-16540. https://doi.org/10.1007/s10639-024-12464-x

This study aims to determine the impact of art programmes, such as music and painting, on the psycho-emotional state of students, their socialisation and the development of key personal competences. To achieve this goal, the following tasks need to be solved:

1. This research investigates present methods that utilise art within educational frameworks.
2. Narrowly the effects of artistic instruction on stress reduction and emotional intelligence enhancement.
3. The research investigates how technological tools enable artistic methods to produce more significant educational impacts.
4. This project aims to develop recommendations which focus on adapting art programming within various educational settings.

Furthermore, this research targets two major scientific incongruences by describing new pedagogical methods for art integration and applied artistic programmes to develop students' holistic development.

Literature review

Studies indicate that researchers focus intensely on art and music, which are instructional tools for educational influence and personal transformation. Jochum[9] stresses that arts education requires creative technology integration, while Boske[10] develops a conceptual model to use art creatively for social justice goals. Tan et al.[11] analyse how creativity in music education creates new educational strategies for the modern era. Kangas et al.[12] investigate STEAM education to demonstrate creative learning serves vital functions for early learners. In their early childhood arts education study, Acker et al.[13] demonstrate

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[9] Jochum, R. "Forward Design: Creative Technologies in Art Education." In Bast, G., Carayannis, E. G., and Campbell, D. F. J. (Eds.), The Future of Education and Labour. Arts, Research, Innovation and Society. Springer, Cham, pp. 123-134, 2019. https://doi.org/10.1007/978-3-030-26068-2_11

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[11] Tan, A. G., Tsubonou, Y., Oie, M., and Mito, H. "Creativity and Music Education: A State of Art Reflection." In Tsubonou, Y., Tan, A. G., and Oie, M. (Eds.), Creativity in Music Education. Creativity in the Twenty First Century. Springer, Singapore, 2019, pp. 23-35. https://doi.org/10.1007/978-981-13-2749-0_1

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[13] Acker, A., Nyland, B., Deans, J., Payman, K., and Klarin, S. "The Arts in Early Childhood. In Music Composition in Contexts of Early Childhood. Palgrave Macmillan, Cham, 2021, pp. 55-67. https://doi.org/10.1007/978-3-030-91692-3_7

how such education creates meaningful learning outcomes. Gordon[14], Mooney and Hatton[15] focus on freedom and creativity in education using the arts. Ampartzaki et al.[16] consider the interaction of art and STEM as a platform for innovative learning. Gjærum et al.[17] analyse drama to enhance students' competences.

Several studies, including Carbó Ribugent and Servalls Munar[18], highlight the role of arts education for sustainable development, while Ivcevic et al.[19] emphasise transformative creativity in learning. Chen and Liao[20] focus on new approaches to teaching media arts in secondary schools in Taiwan. At the same time, Wang[21,22] explores the use of virtual reality in music education in China. Many studies emphasise the importance of new technologies. For example, Mandanici et al.[23] propose a taxonomy of digital resources for music

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[14] Gordon, S. P. "Freedom and Creativity." In Developing Successful Schools. Palgrave Macmillan, Cham, 2022, pp. 79-93. https://doi.org/10.1007/978-3-031-06916-1_9

[15] Mooney, M., and Hatton, C. "Designing a Future through Imaginative Responses to Arts Teaching." In Tan, L., and Kim, B. (Eds.), Design Praxiology and Phenomenology. Springer, Singapore, 2022, pp. 101-118. https://doi.org/10.1007/978-981-19-2806-2_4

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[20] Chen, Y. H., and Liao, C. "Case Studies of High School Art Teachers' Perceptions of Media Arts Teaching under the New Arts Curriculum Guidelines in Taiwan." In Knochel, A. D., and Sahara, O. (Eds.), Global Media Arts Education. Palgrave Studies in Educational Futures. Palgrave Macmillan, Cham, 2023, pp. 333-350. https://doi.org/10.1007/978-3-031-05476-1_17

[21] Wang, Y. "China's Use of Virtual and Augmented Reality Music Simulators for Teaching Music." Asia Pacific Education Review, 2024. https://doi.org/10.1007/s12564-024-10003-4

[22] Wang, Y. "Challenges in Music Education in Chinese Colleges and Universities." Journal of Knowledge Economy, 2024. https://doi.org/10.1007/s13132-024-02191-6

[23] Mandanici, M., Spagnol, S., Ludovico, L. A., Baratè, A., and Avanzini, F. "A Taxonomy of Digital Music Learning Resources." In Digital Music Learning Resources. SpringerBriefs in Education. Springer, Singapore, 2023, pp. 89-103. https://doi.org/10.1007/978-981-99-4206-0_4

education, while Giretti et al.[24] analyse the role of artificial intelligence in creative education. Yang[25] looks at how VR tools help students cope with stress in music education. Guo[26] highlights the impact of mobile apps on students' self-esteem in music education in East Asia. Barton and Burke's[27] study focuses on aesthetic positive pedagogy, which builds students' emotional resilience and aesthetic perception. del Moral-Espín et al.[28] analyse the impact of art projects on well-being within learning communities. Riddett and Siegesmund[29] highlight the importance of an arts-based approach to resilience through learning. Ruokonen[30] explores the integration of arts-based pedagogies in early childhood education in Finland, while Espeland[31] suggests that music education should be viewed as a craft that enhances student engagement.

Tan and Kan's[32] study reveals the importance of studio practices in integrating art into education, mainly through graphic design, emphasising

[24] Giretti, A., Durmus, D., Lemma, M., Vaccarini, M., Zambeli, M., Guidi, A., di Meana, F. "Knowledge Engagement in Art and Design Education: About the Role of AI in Creativity Education." In Isaias, P., Sampson, D. G., and Ifenthaler, D. (Eds.), Artificial Intelligence for Supporting Human Cognition and Exploratory Learning in the Digital Age. Cognition and Exploratory Learning in the Digital Age. Springer, Cham, 2024, pp. 15-28. https://doi.org/10.1007/978-3-031-66462-5_1

[25] Yang, P. "Virtual Reality Tools to Support Music Students to Cope with Anxiety and Overcome Stress." Education and Information Technologies, vol. 29, 2024, pp. 16525-16540. https://doi.org/10.1007/s10639-024-12464-x

[26] Guo, N. "Characteristic Features of Modern Teaching Music Methods in East Asia: Examining the Influence of Interactive Learning and Mobile Apps on Musical Self-Esteem." Education and Information Technologies, vol. 29, pp. 25353-25374, 2024. https://doi.org/10.1007/s10639-024-12856-z

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[32] Tan, C. K., and Kan, R. Y. P. "Creative Inquiry in Graphic Design: Studio Habits in an Integrated Arts Project." In Koh, J. H. L., and Kan, R. Y. P. (Eds.), Teaching and Learning the Arts in Higher Education with Technology. Springer, Singapore, 2021, pp. 151-164. https://doi.org/10.1007/978-981-16-4903-5_8

the development of creative thinking. Barton and Burke[33] describe the concept of aesthetic positive pedagogy, which emphasises the importance of aesthetic experience for developing emotional intelligence and forming positive attitudes towards learning. Del Moral-Espín et al.[34] discuss the impact of collective artistic practices on social cohesion and student well-being, which is especially important for creating collaboration in the educational environment. Giretti et al.[35] explore the integration of artificial intelligence into art education, demonstrating how innovative technologies stimulate creativity and student engagement. Bruzzone[36] analyses the phenomenological approach to education, focusing on using emotions to develop emotional competence through art. Mandanici et al.[37] describe digital resources for music learning that are interactive and adaptable to the digital age. Guo[38] highlights interactive music learning in East Asia that promotes musical self-esteem through mobile apps. Yang[39] examines the use of virtual reality to overcome stress and anxiety among music students, creating a comfortable environment for emotional development. These works emphasise the importance of art as a powerful tool for developing emotional intelligence, reducing stress and fostering creativity, and introducing technology expands its possibilities in modern education.

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[33] Barton, G., and Burke, K. "Aesthetic positive pedagogy explained." In Aesthetic Positive Pedagogy. Palgrave Macmillan, Cham, 2024, pp. 45-60. https://doi.org/10.1007/978-3-031-50829-5_2

[34] del Moral-Espín, L., Serván-Melero, C., Gallego-Noche, B., and Rosendo-Chacón, A. M. "Agüita: Educational Commons, Arts and Well-Being." In Cappello, G., Siino, M., Fernandes, N., and Arciniega-Caceres, M. (Eds.), Educational Commons. UNIPA Springer Series. Springer, Cham, 2024, pp. 231-245. https://doi.org/10.1007/978-3-031-51837-9_8

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[37] Mandanici, M., Spagnol, S., Ludovico, L. A., Baratè, A., and Avanzini, F. "A Taxonomy of Digital Music Learning Resources." In Digital Music Learning Resources. SpringerBriefs in Education. Springer, Singapore, 2023, pp. 89-103. https://doi.org/10.1007/978-981-99-4206-0_4

[38] Guo, N. "Characteristic Features of Modern Teaching Music Methods in East Asia: Examining the Influence of Interactive Learning and Mobile Apps on Musical Self-Esteem." Education and Information Technologies, vol. 29, pp. 25353-25374, 2024. https://doi.org/10.1007/s10639-024-12856-z

[39] Yang, P. "Virtual Reality Tools to Support Music Students to Cope with Anxiety and Overcome Stress." Education and Information Technologies, vol. 29, 2024, pp. 16525-16540. https://doi.org/10.1007/s10639-024-12464-x

Kerby et al.[40] focus on the challenges of implementing an arts component in the Australian curriculum, while Bruzzone[41] examines the emotional aspect of teaching through the arts. Koh et al.[42] analyse the implementation of technological and pedagogical knowledge for teaching art in higher education. Chen and Liao[43] focus on the use of multimedia in art teaching. Leung et al.[44] highlight the challenges in teaching visual arts in early childhood, while Wang[45] explores the use of VR simulations in music education and analyses the challenges in music education in Chinese universities. Tan and Kan[46] investigate integrating art into design projects to develop creative thinking. Mandanici et al.[47] develop a taxonomy of digital resources for music education, while Giretti et al.[48] analyse the impact of AI on art and design education.

However, many aspects remain under-researched. Among them are the impact of art and music approaches on students' intercultural integration and the long-term effectiveness of integrating modern technologies into art and music education.

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[40] Bruzzone, D. "The Emotional Life as a Pedagogical Concern. In Emotional Life. Phänomenologische Erziehungswissenschaft (Vol. 14). Springer VS, Wiesbaden, 2023, pp. 29-45. https://doi.org/10.1007/978-3-658-42548-7_1

[41] Bruzzone, D. "The Emotional Life as a Pedagogical Concern. In Emotional Life. Phänomenologische Erziehungswissenschaft (Vol. 14). Springer VS, Wiesbaden, 2023, pp. 29-45. https://doi.org/10.1007/978-3-658-42548-7_1

[42] Koh, J. H. L., Tay, P. C., and Binte Mohamad Ali, S. "Creating Institutional Technological Pedagogical Content Knowledge-A Case Study through the Eyes of an Educational Technology Support Unit. In: Koh, J. H. L., and Kan, R. Y. P. (Eds.), Teaching and Learning the Arts in Higher Education with Technology. Springer, Singapore, 2021, pp. 195-208. https://doi.org/10.1007/978-981-16-4903-5_10

[43] Chen, Y. H., and Liao, C. "Case Studies of High School Art Teachers' Perceptions of Media Arts Teaching under the New Arts Curriculum Guidelines in Taiwan." In Knochel, A. D., and Sahara, O. (Eds.), Global Media Arts Education. Palgrave Studies in Educational Futures. Palgrave Macmillan, Cham, 2023, pp. 333-350. https://doi.org/10.1007/978-3-031-05476-1_17

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[48] Giretti, A., Durmus, D., Lemma, M., Vaccarini, M., Zambeli, M., Guidi, A., di Meana, F. "Knowledge Engagement in Art and Design Education: About the Role of AI in Creativity Education." In Isaias, P., Sampson, D. G., and Ifenthaler, D. (Eds.), Artificial Intelligence for Supporting Human Cognition and Exploratory Learning in the Digital Age. Cognition and Exploratory Learning in the Digital Age. Springer, Cham, 2024, pp. 15-28. https://doi.org/10.1007/978-3-031-66462-5_1

Methods

Qualitative and quantitative approaches complemented each other in this research entitled "Music and Art as Tools of Pedagogical Influence and Personal Development". Scientific documents were analysed through a modern research synthesis focusing on how art combined with music enhances educational processes. The research helped discover several important methods which integrate art into pedagogical practices. A questionnaire gathered data through the Perceived Stress Scale (PSS) and questions about how art programmes influenced participants' emotional well-being. The research conducted semi-structured interviews, which enabled the investigators to gain extensive insights regarding participants' perspectives on educational arts integration.

A pedagogical experiment involved 176 students from an age range of 18 to 25. The study was carried out in three stages: before the programmes started, six months later, and after completion. The art programme: Children participated in activities that combined musical learning and painting sessions with theatrical performances. We enhanced qualitative data by observing participant conduct and emotional changes during their art class sessions. Investigators analysed instrument data from questionnaires and interview responses together with observation results. We processed the quantitative data through SPSS software. Descriptive statistics analysis identified art programme effectiveness, while content analysis revealed primary themes from interview respondents. The ethical aspects of the study were observed: Each participant acknowledged their consent to be in the study, while the researchers protected personal information through data anonymisation. This approach allowed us to obtain reliable and valid results that confirm the positive impact of art on the emotional and cognitive development of individuals.

Results

Music and art are powerful tools for shaping moral, aesthetic and spiritual values, as they directly affect the emotional sphere, stimulate creative thinking and develop the ability to empathise. Through its aesthetic impact, art awakens a sense of beauty, harmony and goodness, contributing to the education of high moral standards. Music, in particular, can transmit ideas and

emotions that help individuals identify with positive ideals and develop empathy and tolerance. It builds emotional resilience and promotes spirituality through the awareness of deep meanings embedded in artistic images.

The arts, in their various forms (painting, sculpture, theatre), allow students to immerse themselves in the world of cultural and moral values from different eras and nations. It develops critical thinking, aesthetic taste and cultural identity while fostering an understanding of universal values. Thus, music and the arts are both a means of developing creative potential and fundamental pedagogical tools that contribute to the comprehensive formation of a harmonious, spiritually rich personality.

Music and the arts are important components of the pedagogical process, contributing to aesthetic development and the formation of key personal competences, such as emotional intelligence, creativity, and self-expression. In modern education, musical and artistic forms are powerful tools that support innovative approaches to learning, stimulate creative thinking, and develop the ability to regulate emotions (Table 1).

Table 1

The mechanism of influence	Effect on emotional intelligence	Stimulating creativity	Support for self-expression
Emotional engagement	Developing empathy and understanding the emotions of others	Creating an emotional context for ideas	Help with expressing complex emotions
Using improvisation	Increased ability to adapt to new emotional situations	Generating new ideas through experimentation	Encouragement to create unique artistic solutions
Interactive artistic practices	Improving interpersonal communication skills	Involvement in joint creative projects	Supporting group expression
Use of digital technologies	Development of the ability to emotional regulation	Access to tools for visualising ideas	Create personalised artwork

The mechanism of influence	Effect on emotional intelligence	Stimulating creativity	Support for self-expression
Cultural integration	Building tolerance and acceptance of diversity	Stimulating the intercultural exchange of ideas	Reflecting on the uniqueness of one's own cultural identity

**Mechanisms of music and art influence the development of emotional intelligence, creativity and self-expression in the learning process
Source: developed by the author based on
(Jochum[49]; Tan et al.[50]; Kangas et al.[51])**

Musical and artistic forms are effective tools for developing emotional intelligence, stimulating creativity, and supporting students' self-expression. Their integration into the pedagogical process contributes to the formation of a harmoniously developed personality adaptive to the challenges of modern society. Research into these mechanisms will lead to better educational effectiveness outcomes.
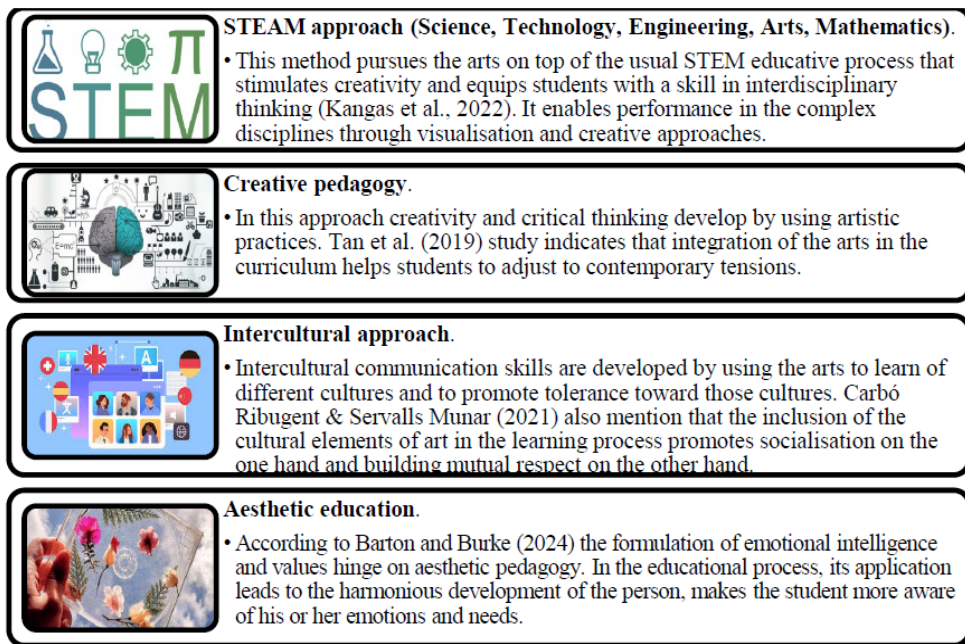
Including art within pedagogical processes stands as an essential innovative educational practice which merges student mental growth with emotional readiness and social aptitude. All these essential skills that develop through art help students maintain their psychological equilibrium while ensuring their complete personal development. Through artwork, students can understand challenging concepts more deeply through artistic visual methods and creative learning strategies. Through arts education, students unlock fresh avenues for intercultural exchanges, enhanced social harmony, and better intergroup relations. Through this method, we can enhance academic success while teaching our students how to deal with societal challenges and develop social competence and emotional strength. Figure 1 presents an overview of leading scientific methods used in this domain.

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[49] Jochum, R. "Forward Design: Creative Technologies in Art Education." In Bast, G., Carayannis, E. G., and Campbell, D. F. J. (Eds.), The Future of Education and Labour. Arts, Research, Innovation and Society. Springer, Cham, pp. 123-134, 2019. https://doi.org/10.1007/978-3-030-26068-2_11

[50] Tan, C. K., and Kan, R. Y. P. "Creative Inquiry in Graphic Design: Studio Habits in an Integrated Arts Project." In Koh, J. H. L., and Kan, R. Y. P. (Eds.), Teaching and Learning the Arts in Higher Education with Technology. Springer, Singapore, 2021, pp. 151-164. https://doi.org/10.1007/978-981-16-4903-5_8

[51] Kangas, K., Sormunen, K., and Korhonen, T. "Creative Learning with Technologies in Young Students' STEAM Education." In Papadakis, S., and Kalogiannakis, M. (Eds.), STEM, Robotics, Mobile Apps in Early Childhood and Primary Education. Springer, Singapore, 2022, pp. 89-102. https://doi.org/10.1007/978-981-19-0568-1_9

Figure 1

STEAM approach (Science, Technology, Engineering, Arts, Mathematics).
• This method pursues the arts on top of the usual STEM educative process that stimulates creativity and equips students with a skill in interdisciplinary thinking (Kangas et al., 2022). It enables performance in the complex disciplines through visualisation and creative approaches.

Creative pedagogy.
• In this approach creativity and critical thinking develop by using artistic practices. Tan et al. (2019) study indicates that integration of the arts in the curriculum helps students to adjust to contemporary tensions.

Intercultural approach.
• Intercultural communication skills are developed by using the arts to learn of different cultures and to promote tolerance toward those cultures. Carbó Ribugent & Servalls Munar (2021) also mention that the inclusion of the cultural elements of art in the learning process promotes socialisation on the one hand and building mutual respect on the other hand.

Aesthetic education.
• According to Barton and Burke (2024) the formulation of emotional intelligence and values hinge on aesthetic pedagogy. In the educational process, its application leads to the harmonious development of the person, makes the student more aware of his or her emotions and needs.

Scientific approaches to the integration of art into the pedagogical process and their impact on the learning success and socialisation of students
Source: Author's elaboration based on (Kangas et al.[52]; Tan et al.[53]; Carbó Ribugent and Servalls Munar[54]; Barton and Burke[55])

Art integration into the educational process positively affects students' academic results. Creative tasks and visualisations can promote a deeper

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understanding of very complicated topics. Furthermore, group projects help socialise people and build collaboration, empathy, and communication skills. However, scientific approaches to the inclusion of art into education have great potential to improve student's educational results and social adaptation. Additionally, research into these approaches may expand the possibilities for use in other educational contexts.

What has been considered is the global pedagogical experience related to using art in the educational environment. Integrating art into the pedagogical process is a common practice worldwide. Table 2 provides examples of successful experiences using art in education.

Table 2

Country	Practice	Description	Results
Finland	Integrating art into STEAM education	Using music, theatre and visual arts to develop critical thinking and creativity (Kangas et al., 2022).	Improving academic performance, developing creativity, and strengthening interdisciplinary thinking skills.
USA	Programme "Art as a Tool for Social Change"	Engaging art to discuss social issues through creative projects (Boske, 2020).	Formation of empathy, development of communication skills, and enhancement of students' social activity.
Japan	Musical improvisation as a method of developing creative abilities	Integrating music lessons into traditional school curricula (Tan et al., 2019).	Improving cognitive functions, developing emotional intelligence, and increasing interest in learning.
Spain	The use of art in shaping environmental awareness	Holding art workshops in museums (Carbó Ribugent & Servalls Munar, 2021).	Formation of environmental awareness and increased interest in culture and art.

Country	Practice	Description	Results
Australia	Aesthetic pedagogy	Using artistic methods creates an emotional connection with the learning material (Barton & Burke, 2024).	Increased satisfaction with learning and increased emotional stability of students.

**Examples of successful practices of using art in the educational environment
Source: developed by the author based on (Kangas et al.[56]; Boske[57];
Tan et al.[58]; Carbó Ribugent and Servalls Munar[59]; Barton and Burke[60])**

Global pedagogical experience shows that integrating art into the curriculum contributes not only to academic success but also to the formation of moral values, emotional stability, and social responsibility in students. Successful practices from different countries demonstrate the importance of using art to achieve comprehensive personal development.

An interdisciplinary approach that integrates art, music and traditional academic disciplines is an effective tool for forming a harmoniously developed personality. This approach provides a link between different fields of knowledge, creating opportunities for the comprehensive development of students, in particular:

- *Stimulating cognitive development.* Combining art and music with disciplines such as mathematics, science, or history helps to improve the ability to think analytically and abstractly and solve complex

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problems (Kangas et al. Kangas et al.[61]). For example, using musical rhythms in mathematics helps improve the understanding of proportions and sequences.

- *Development of emotional intelligence.* Integrating the arts promotes a deeper understanding of emotions through creative practices. This allows students to learn to manage their emotions, empathise with others and build effective communication (Barton and Burke[62]).
- *Increase motivation to learn.* Using art as part of traditional academic disciplines makes learning more engaging. This approach helps to maintain interest in complex topics and develops a positive attitude towards learning among students (Tan et al. [63]).
- *Development of creativity.* Combining art with other disciplines stimulates creative thinking as students learn to look for non-standard solutions and demonstrate an innovative approach to solving problems (Espeland[64]).
- *Developing social skills.* Collective creative projects promote cooperation, respect for the opinions of others, and the ability to work in a team. These skills are critical for the successful socialisation of the individual (Carbó Ribugent and Servalls Munar[65]).

The interdisciplinary approach, which combines art, music, and traditional disciplines, contributes not only to academic achievement but also to the comprehensive development of the individual. It stimulates cognitive activity, develops emotional intelligence, increases motivation, and helps build key social and creative skills necessary for adaptation to modern society.

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Art and its various forms, such as music, painting and theatre, play an important role in modern education, contributing not only to cognitive development but also to the emotional well-being of students. In today's context of growing stress among young people, the study of the impact of art as a therapeutic tool is of particular relevance. Integrating art into the educational process helps improve the psycho-emotional state and contributes to the development of emotional regulation skills. We conducted a study to investigate the impact of art on reducing stress and improving the psycho-emotional state of students. We used a comprehensive approach that combined quantitative and qualitative methods of analysis. The study aimed to determine the effectiveness of art programmes (music, painting) in reducing stress. The study involved 176 students aged 18 to 25 from the R. M. Glière Kyiv Municipal Academy of Music, selected based on representativeness. Data were collected using a questionnaire (Perceived Stress Scale, PSS), observations, and semi-structured interviews (Appendix A). Participants took part in art programmes for 12 months over five years of study (2019-2023), and data were collected at three stages: before the programmes started, 6 months later, and after their completion. The quantitative analysis included descriptive statistics calculated using SPSS, while the qualitative analysis was conducted using the content analysis of interviews. All ethical standards were met participants provided informed consent, and the results were anonymised. This comprehensive approach ensured the reliability and validity of the data obtained (Figure 2).

Figure 2
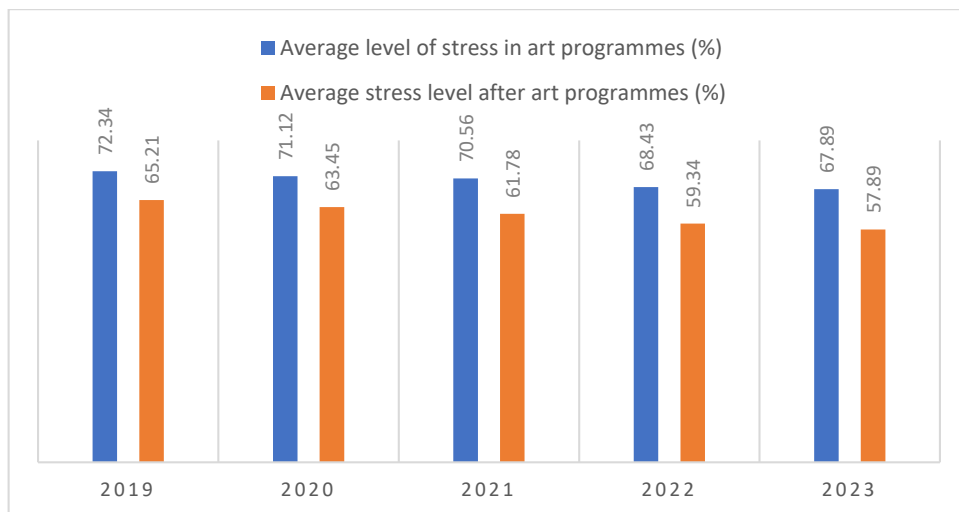
Dynamics of the average stress level of students before and after participation in art programmes (2019–2023)
Source: calculated by the author

During 2019-2023, there was a steady downward trend in the stress level among students due to the implementation of art programmes. In 2019, the average stress level before the programmes were 72.34%, and after the programmes – 65.21%, which resulted in a 7.13% increase in stress reduction. In 2020, this figure was 71.12% before the programmes and 63.45% after, with an increase of 7.67%. In 2021, the stress level before the programmes decreased to 70.56% and 61.78% afterwards, which increased by 8.78%. In 2022, the stress level before participation in the programmes was 68.43%, and afterwards – 59.34%, with an increase of 9.09%. In 2023, the highest increase was recorded – 10%, with a decrease in stress from 67.89% to 57.89%. For the five years, in general, the level of stress after participation in the programmes was reduced by 7.32%. This shows how the situation is alleviated through art programmes, and the psycho-emotional state of students is improved and gradually optimised.

Music, designs and theatre practices are potent tools for developing students' emotional intelligence and creativity and linking their psycho-emotional state. So, music reduces stress through relaxing properties of melodies, harmonies, and rhythms. It also helps regulate emotions, relieve anxiety and sets a good mood for self-expression. It is a visual channel for feelings, thoughts, and forms of developing imagination and thinking creatively. Creating works of art during painting classes transforms participants into colour, shape and image workers with skills of concentration, reflection and self-discovery. A combination of these arts in the programmes is made so that these art forms address the individual's cognitive, emotional and social spheres, thereby promoting an integrated approach for harmonious individual development.

Figure 3 shows the dynamics of improvement in the psycho-emotional state of the participants.

Figure 3
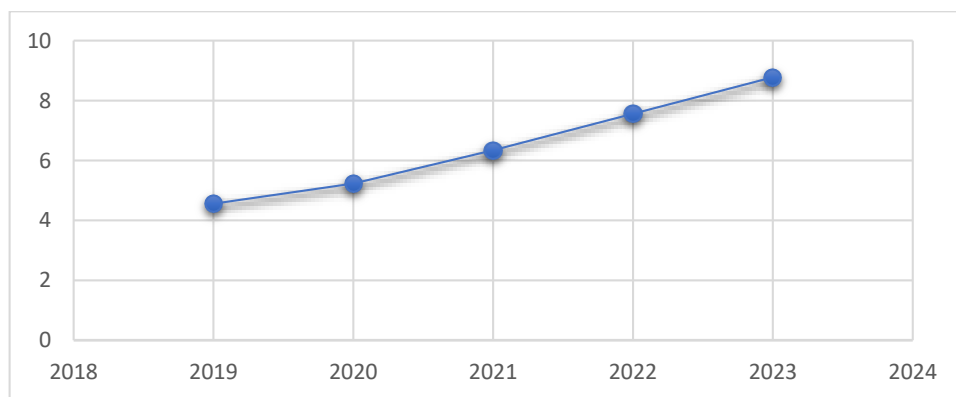
Improvement in psycho-emotional state (%)
Source: calculated by the author

The graph also shows the dynamics of improvement in the psycho-emotional state of students expressed as the percentage between 2019 and 2023 due to participation in art programmes. In 2019, the initial impact of these programmes on improving the psycho-emotional state was 4.56%. In 2020, this figure increased to 5.23%, an increase of 0.67% compared to the previous year. In 2021, the improvement reached 6.34%, increasing by 1.11%. In 2022, the figure rose to 7.56%, an increase of 1.22%. In 2023, the highest level of improvement was recorded - 8.78%, with an increase of 1.22% compared to the previous year.

In general, over the five years, there has been a steady increase in the improvement of psycho-emotional state from the initial 4.56% to 8.78%, demonstrating the programmes' effectiveness. The most significant increases were observed in 2022 and 2023 (1.22% each), which indicates the optimisation of programmes and the growth of their impact on students. These dynamics confirm that art programmes have a significant positive impact on the psycho-emotional state of students.

The study allowed us to formulate several recommendations for teachers regarding the use of music and art (Table 3).

Table 3

The field of art	Recommendations
Music	Use relaxation music to reduce stress.
	Integrate musical exercises to develop emotional intelligence.
	Organise collective music projects to improve communication.
Painting	Conduct art therapy classes to express emotions.
	Involve them in the creation of individual and collective art projects.
	Use colour therapy to stimulate creative thinking.
Integration of art	Combine art with other disciplines (STEM, history).
	Create intercultural art projects to build tolerance.

Recommendations for teachers on the use of music and art
Source: developed by the author

These recommendations will help teachers effectively use music and art to form a harmonious personality for students.

Discussion

The results of the study confirmed that art, in particular music and painting, has a positive impact on the emotional state of students, helping to reduce stress and develop emotional intelligence. Observations of participation in art programmes have shown a stable trend towards improving the psycho-emotional state of participants throughout all stages of the experiment. These results are consistent with Ruokonen[66], who emphasises the effectiveness of art in developing emotional resilience. At the same time, the study results showed a more significant impact of music programmes compared to painting classes on reducing stress levels. This is in line with the findings of Yang[67], who notes that music, especially with virtual reality, creates a comfortable environment for emotional regulation. However, the findings of Giretti et al.[68], which emphasise the equivalence of different art forms, contradict our data, which requires further research.

Also, interactive forms of artistic activities in which the participants participated in group interaction played a significant role in the skill development of communication and cooperation. This is backed by the points made by Barton and Burke[69], who understand that collective artistic practices build emotional resilience and social cohesion. Nevertheless, according to Guo[70], Mobile Applications can be an adequate substitute for the group of lessons in some contexts, although this is not confirmed in this study. Most of the study's findings are consistent with the aim and hypothesis to assess whether the arts programmes effectively reduce stress and enhance emotional

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intelligence. However, the question of this kind of programme's long-term effect and the question of adjusting these methods to other educational settings remains open.

The limitation of this study is the small size of the sample. That only involves one class and age range at one educational institution. Results need to be generalised further with more diverse groups of participants and a wider range of art forms used. The results suggest the integration of art programmes into the educational process's overall context aimed at improving participants' psycho-emotional condition, promoting emotional intelligence, and developing socially significant skills. Further work might be done to develop innovative programmes blending various art forms with consideration of modern technologies: virtual reality and artificial intelligence.

Conclusion

The study found that the involvement of art and music in the educational process plays a role in stress reduction, intellectual and emotional intelligence development and social development. This proves the effectiveness of art programmes as a tool for harmonious personal development. The novelty of the results is to identify the dynamics of improving the psycho-emotional state of participants through the implementation of interactive art programmes that include group interaction and innovative technologies. In particular, music proved to be the most effective means of reducing stress. The study's practical significance is manifested in the possibility of adapting art programmes to different age groups and educational contexts. This opens up prospects for their widespread use in pedagogical practice to support the emotional well-being of students. The study's limitations include a small sample of participants and a narrow age range. This limits the generalisability of the results, which requires further sample expansion in future studies. The study results are consistent with the hypothesis, revealing additional aspects, particularly the potential of using digital technologies in arts programmes to optimise them. This opens up new opportunities for the development of innovative approaches in pedagogy. For further research, it is advisable to focus on studying the long-term impact of art programmes, their impact on academic performance and the development of life skills of students. Investigating the effectiveness of such programmes in teacher training is also important. Developing intercultural art programmes that promote tolerance, intercultural communication and social cohesion is recommended. This approach will help prepare students for effective interaction in a globalised society. Integrating art, music and digital technologies into the educational process can become the basis for new

pedagogical standards. This will help create an environment that promotes the harmonious development of a personality adapted to the challenges of the modern world.

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