

A Study of Using Visual Arts in Music Classroom

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Abstract: This study explored the integration of visual arts elements into music education and its impact on students' musical understanding, creativity, and artistic literacy. The study used a mixed-methods approach that included classroom observations, analysis of student work, and interviews to explore interdisciplinary arts education practices. Findings highlight several key benefits of this interdisciplinary approach: enhancing conceptual understanding through music visualization, increasing student engagement, fostering creativity, supporting diverse learning needs, and making meaningful interdisciplinary connections. Students' ability to visually present musical concepts, to create art across the senses, and to solve problems were all enhanced. In addition, the study explored the potential for integrated instructional design that incorporates art museum and concert hall experiences. While acknowledging the challenges of implementation, the study highlights the great potential of this approach to enrich students' learning experiences and promote a more holistic understanding of the arts. This study contributes to the growing body of knowledge supporting interdisciplinary approaches to arts education and suggests areas for future research, including long-term implications for artistic development, cognitive skills, and overall academic achievement.

Keywords: Music Education, Visual Arts, School Classroom.

1. Introduction

In Europe there are many museums, galleries, concert halls and buildings from different periods. All fields of art are influenced by the times, and there is a deep and mysterious connection between visual arts and music. They are both ways for human beings to express their emotions and explore their inner world, just in different “languages”. This is worth contemplating: is it possible to bring these two art forms closer together? How can they inspire and enhance each other?

This curiosity led me to delve into the integration of visual arts and music education. As Kandinsky [1] said in *Concerning the spiritual in art*, “the colors and forms of painting can resonate with the tones and rhythms of music.” Teachers can use painting to stimulate students' auditory imagination and help them transform visual elements into sound expressions. Numerous studies have proven that introducing visual elements into the music classroom not only enriches students' learning experience, but also stimulates their creativity and helps them understand and appreciate art more fully. At this stage, exploring the organic integration of visual art forms such as painting, architecture and sculpture into music teaching, and summarizing and generalizing the potential impact of such an interdisciplinary approach on students' artistic development can help to help art education should break the boundaries of traditional disciplines and provide students with a broader and richer art world.

2. Application of using visual arts in music education

Music visualization is the translation of musical information into visual form and has significant educational value in the middle school music classroom. This method enhances students' understanding of abstract musical concepts by providing visual representations of rhythmic, melodic, and harmonic elements.

The visual arts as an adjunct to music education offers a variety of advantages and a solid theoretical foundation to support this interdisciplinary approach. This integration not only enhances students' understanding and appreciation of music, but also promotes creativity and cognitive development, in line with current educational trends that emphasize holistic learning experiences. Research has shown that multisensory learning significantly improves educational outcomes. Students are better able to understand and retain information when content is presented through multiple sensory channels. Incorporating visual elements in music education helps students make connections between sounds and images and deepen their understanding of musical concepts [2].

Many concepts in music, such as rhythm, melody, and harmony, can be abstract for beginning students, and Barrett's [3] research suggests that the use of visual representations can help students grasp these abstract concepts more effectively. For example, expressing musical emotion and structure through drawing can make these concepts more concrete and understandable. The integration of visual arts and music education has several benefits. First, it helps to create interdisciplinary connections that allow students to cut through multiple perspectives of artistic expression. Second, visual arts are effective in evoking emotional responses, which are crucial to emotional expression in music composition and performance. In addition, in today's digital age, utilizing students' familiarity with visual stimuli can make music education more relatable and engaging, in keeping with the growing emphasis on developing 21st century skills. By integrating the visual arts with music education, educators can create a more inclusive learning environment that caters to a variety of learning styles, resulting in more cognitively and creatively well-rounded individuals.

Visual representations can help learners better understand and memorize musical structures. By translating auditory information into visual form, students can perceive musical elements more intuitively. This multisensory approach activates both students' musical and visuospatial intelligence, creating a more holistic learning experience [4]. This approach has been proven to increase student engagement and interest and is especially appealing to today's multimedia-savvy learners. It promotes creative thinking and expression and encourages students to explore the connections between music and the visual arts. Music visualization also supports tiered instruction, providing different learning pathways for students with different learning styles. Savage [5] notes that integrating digital technology into music education can increase student engagement and creativity. By watching videos of symbol changes accompanied by music, students can experience music in a new and engaging way, which helps keep their attention and stimulate learning.

Despite the obvious benefits of integrating the visual arts into music education, current music programs often lack this comprehensive approach. Many traditional programs focus primarily on technical skills and theory, ignoring the potential benefits of an interdisciplinary approach. This gap suggests several areas for further research and development. There is a need to explore effective ways to seamlessly integrate the visual arts into all aspects of music education, from theory to performance, and to evaluate the long-term impact of such an integrated approach on students' musical abilities and overall cognitive development. Additionally, research should explore how the integration of the visual arts into music education can increase the accessibility and inclusiveness of music learning, thereby potentially expanding participation and engagement in music programs. By delving into these areas of research, educators and researchers can work to develop more comprehensive and effective

music education strategies that capitalize on the power of the visual arts, thereby potentially revolutionizing music pedagogy in educational institutions and creating more comprehensive, engaging, and impactful learning experiences for students.

3. Methodology

This study utilized a mixed-methods approach, combining qualitative interviews with middle school music teachers and quantitative data from students. In addition to in-depth interviews with teachers, a student survey was conducted to 103 middle school students who had experienced integrated visual arts and music education. Open-ended questions allowed students to describe their experiences with the integrated pedagogy. In addition, a small group of 30 students participated in focus groups to gain a more detailed understanding of their learning experiences. These focus groups explored how the integration of the visual arts impacted their understanding and appreciation of music.

The inclusion of student data helped to provide a more complete picture of the effects of integrating the visual arts into music education. It triangulated data between teacher perceptions, student self-reports, and quantitative measures of learning outcomes. This multifaceted approach strengthens the validity of the findings and provides a more complete understanding of the impact of this interdisciplinary approach.

4. Result and discussion

The experimental course design contains three large chapters, links to which are placed in the attachment. The painting and music materials used range from the Baroque period to modern times. Below I summarize the feedback gathered and briefly summarize a few design ideas and points of interest for readers to consider and learn.

4.1. Embracing Musical Subjectivity in Education

The subjectivity of artistic feeling is a central issue in aesthetics and psychology. Educators emphasize this subjectivity to encourage students to make independent aesthetic judgments and think creatively. The subjectivity of artistic perception stems from a variety of sources, including neurophysiological differences, individual physiological differences, cultural backgrounds, and personal experiences.

Peretz and Zatorre [6] demonstrated that music processing involves multiple brain regions and therefore everyone's response to music is unique. Cultural background and personal experiences also play a crucial role in shaping artistic perception. The subjective nature of artistic perception has had a significant impact on arts education, leading to the concept of "aesthetic education," which goes beyond skill development to include perceptual skills and aesthetic judgment.

In exploring the subjectivity of artistic perception, especially in music education, it is important to emphasize that there is no right or wrong way for students to describe how they feel about music. This educational philosophy is not only consistent with the subjective nature of the arts themselves, but also has far-reaching implications for the overall development of students. Burnard's [7] research emphasizes the importance of creating a safe, supportive environment that encourages students to freely express their musical feelings.

When students believe that their interpretations will not be judged right or wrong, they are more likely to participate actively in musical activities and develop a deeper understanding of music. When students' feelings are seen as valuable and unique, their self-confidence and creativity are significantly enhanced. This approach fosters open-mindedness and encourages students to become creators, which in turn improves analytical and evaluative skills and develops critical thinking. It also helps to develop

students' emotional intelligence, allowing them to learn to understand and respect the emotional experiences of others while enhancing their self-awareness.

4.2. Symmetric Structures in an Interdisciplinary Perspective

The relationship between symmetrical structure and musical weaving was an important part of my choice. In all fields of art, structure and form often play a crucial role. The concept of symmetry is not only reflected in the visual arts but is equally important in music and literature. There are similarities between sonata form, the symmetrical structure of architecture, and the iambic pentameter form of poetry; these art forms create beauty and meaning through similar structural principles.

The loop structure of the sonata (e.g., ABCBA) is like the symmetrical design of certain buildings and the iambic pentameter form of poetry. This symmetry is not just a superficial structural similarity, but reflects the universal human tendency to seek balance, harmony and unity in different art forms. The structure of the sonata reflects elaborate symmetry. The structure of a classical sonata usually consists of a display section, a development section and a reproduction section, forming a kind of ABA framework. Within this framework, the treatment of thematic material tends to exhibit more complex patterns of symmetry, such as the ABCBA cyclic structure. This structure not only provides the work with a clear sense of form, but also creates a sense of aural balance and integrity. On a cognitive level, structural expectations in music have a significant impact on the emotional experience of the listener, and such symmetrical structures provide a sense of predictability and familiarity [8]. This argument applies to architecture and literature as well: symmetrical structures fulfill the human psychological need for pattern recognition and integrity.

However, it is worth noting that this symmetry is not rigid and unchanging. In all these art forms, creators often create tension and interest through subtle deviations from perfect symmetry. For example, in a sonata, repeated sections may alter the thematic material; in architecture, strict symmetry may be broken by the need for detail or function; and in iambic pentameter, repeated passages may have subtle variations.

4.3. Mutual stimulation of vision and music

The interplay and stimulation between different sensory domains in artistic creation has always been a fascinating topic. In particular, the relationship between visual art and music demonstrates how artists cross the boundaries of the senses to find inspiration and expression in different media. The influence of visual elements on the creation of music and the inspiration of music on the creation of visual art demonstrates the complexity and creativity of sensory interaction in the arts. This cross-sensory creative process not only expands the boundaries of artistic expression, but also reveals the multidimensional nature of human perception and creativity.

In musical composition, visual elements are often an important source of inspiration. As Kandinsky [1] explores, colors and shapes can directly evoke specific musical sensations. He argued that the essence of art is an “inner need” that transcends particular sensory forms. This view inspired many composers to attempt to translate visual experiences into sound. Messiaen's *Couleurs de la Cité Céleste* (1963), for example, was directly inspired by stained-glass windows, translating the visual experience of color into complex harmonic structures and timbral variations. Cook [9] further explored the interaction between music and visual art. He notes that such cross-sensory compositions go beyond simple analogies or translations and involve deeper structural and emotional correspondences. For example, Debussy's orchestral work *La Mer* (1905), while inspired by ocean views, is not a direct depiction of a visual landscape, but rather an abstract expression of the dynamic and emotional experience of the sea within the structure and development of the music.

In turn, music has had an equally profound influence on the visual arts. Klee's paintings, for example, are often described as having a “polyphonic” quality that draws directly on the concept of polyphony in music. As early as the middle of the last century, Klee [10] explored the “temporality” of visual elements by directly comparing the line in a drawing to the melody in music in his pedagogical notebook, *The Pedagogical Sketchbook*. Such cross-sensory compositions are even more evident in modern art. For example, Cy Twombly's large-scale abstract paintings are often described as musical in nature, with their brushstrokes and compositions seen as visual representations of musical rhythms and dynamics.

In the fields of cognitive science and neurodegeneration, researchers have begun to explore the neural underpinnings of such cross-sensory art experiences. Zeki [11] proposes that art creation and appreciation involve the concerted activity of multiple sensory regions in the brain. This idea provides new insights into cross-sensory art making, suggesting that there may be deep neural connections between different sensory experiences. It is worth noting that this cross-sensory creation is not a simple one-to-one correspondence. As Cytowic and Eagleman [12] discuss, even among individuals with associative experiences, inter-sensory correspondences are highly individualized and complex. This reminds us of that inter-sensory stimulation in artistic creation is a complex and individualized process, profoundly influenced by the artist's personal experience, cultural background, and creative intent.

4.4. Integrated Instructional Design for Art Museum and Concert Hall Experiences

Interdisciplinary approaches are increasingly emphasized in contemporary art education. Combining visual arts and music education through field trips to galleries, museums, and concert halls offers students a unique opportunity to experience and understand the connections between different art forms. This diverse arts education embodies the core concepts of multiple intelligence theory and experiential learning. By experiencing works of art firsthand, students can develop deeper and more lasting understandings [13]. Burnham and Kai-Kee [14] provide valuable guidance that emphasizes the importance of guided exploration and dialogue in art museum education. They suggest the use of open-ended questions that encourage students to actively observe and reflect. In terms of the concert hall experience, Kerchner [15] introduced the concept of “multisensory listening,” which encourages students to experience music not only with their ears, but also with their eyes and bodies. There are already many visual exhibitions of music with the help of modern digital multimedia. Taking students to similar events can help them make connections between the visual arts and music.

Integrating art gallery, museum, and concert hall experiences into art education provides students with a unique opportunity to explore the relationship between the visual arts and music. This interdisciplinary approach not only promotes students' understanding and appreciation of the arts, but also fosters their critical thinking and creativity. Although implementation can be challenging, through careful design and appropriate instructional strategies, such programs can greatly enrich students' arts education experiences. Future research could further explore the long-term impact of this interdisciplinary approach to teaching and learning and how it can be expanded to other subject areas.

5. Conclusion and reflection

The findings of the study emphasize several key points. First, music visualization in middle school music education enhances conceptual understanding, increases engagement, fosters creativity, supports diverse learning needs, and creates interdisciplinary connections. This multifaceted approach contributes positively to students' musical literacy development and overall educational experience. Secondly the subjective nature of artistic perception is critical to the development of

independent aesthetic judgment and creative thinking. By recognizing that there is no right or wrong way to understand music, educators can create a more inclusive and supportive learning environment that encourages active participation and deeper understanding. Again, this study emphasizes the significance of symmetrical structures in different art forms such as music, architecture, and poetry. This interdisciplinary perspective not only enhances students' appreciation of structural elements in various arts, but also reveals the universal human tendency to seek balance and harmony in creative expression. The mutual stimulation between visuals and music is a particularly intriguing aspect of this study. The interplay between visual elements and musical compositions demonstrates the complexity of sensory interactions in art making and provides new avenues for creative expression and learning. Finally, integrated instructional design that incorporates art museum and concert hall experiences proves to be a powerful tool for enhancing students' understanding of the connections between different art forms. This approach coincides with contemporary educational theories that emphasize experiential learning and multiple intelligence.

Reflecting on this study, integrating the visual arts into music education has tremendous potential to enrich students' learning experiences and foster a more holistic understanding of the arts. However, challenges remain in effectively implementing this interdisciplinary approach within a traditional educational framework. The inspiration of visual elements in music creation and the influence of music on visual art creation demonstrate the richness and complexity of sensory interactions in art creation. This cross-sensory creative process not only expands the boundaries of artistic expression, but also reveals the multidimensional nature of human perception and creativity. By exploring the connection between vision and hearing, artists have created works that transcend the boundaries of a single sense, enriching our understanding of the nature of art. Future research could further explore the cognitive and neural basis of this cross-sensory creativity, as well as its application and development in the digital age and new media art.

It is worth noting that there are many challenges to implementing this interdisciplinary curriculum design. The complexities of interdisciplinary collaboration include communication barriers and differences in assessment criteria between faculty from different disciplines. As a result, students may be confused or overwhelmed by interdisciplinary connections. To address this issue, it is recommended that cognitive flexibility theory be utilized to design instructional strategies to help students build interdisciplinary knowledge networks. Another challenge is how to assess student learning outcomes. Multiple assessment methods, including student self-reflection, peer assessment, and portfolio assessment, are recommended to provide a comprehensive picture of student learning and growth.

Future research could explore the long-term effects of this integrated approach on students' artistic development, cognitive skills, and overall academic performance. It would also be valuable to examine how practical barriers to implementation (e.g., resource constraints and teacher training) can be overcome. Overall, this study contributes to the growing body of knowledge supporting interdisciplinary approaches to arts education. By bridging the gap between visual arts and music, educators can create more engaging, comprehensive, and impactful learning experiences that prepare students for the increasingly interconnected world of the arts and beyond.

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