



From Walls to Screens: The Effectiveness of Using Mural Art into Interactive Videos as Teaching Aid in Learning Elements of Art

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ABSTRACT

The way that students interact with cultural and visual materials has been completely transformed by digital innovation in art education. The usefulness of converting mural art into interactive video-based teaching tools for teaching art elements is examined in this study. Traditional art materials can now be transformed into dynamic, interactive instructional tools with the development of digital technology. Specifically, interactive movies enable students to actively interact with visual content, zoom in, annotate, and investigate symbolic implications. Despite its promise, little is known about how mural art's transition "from walls to screens" affects students understanding of artistic aspects, artistic expression, and cultural appreciation. Pre- and post-tests, surveys, focus group interviews, and creativity rubrics were used to gather data. The findings showed that interactive mural videos greatly benefited students' creative expression, raised motivation and engagement, and improved their comprehension of line, colour, and texture. According to the research, transferring mural art "from walls to screens" combines classic aesthetics with contemporary pedagogy, providing a successful digital art teaching method for classrooms today.

Keywords: Mural, art, digital, innovation, education

INTRODUCTION

One of the most important and ancient types of public art is murals, which are frequently made to tell stories about local history, cultural identity, and social ideals (Smith, 2018). Murals provide abundant chances for aesthetic appreciation, symbolism, and visual narrative in educational settings. Additionally, they give pupils a simple means of investigating the elements of art line, shape, colour, texture, value, space, and form in the context of real cultural narratives. Murals are still not widely used in classrooms, though. Whether found in wall paintings or textbooks, static visuals rely significantly on instructor mediation and may limit students' ability to engage more deeply with subtle details or symbolic interpretation (Tan & Hui, 2021). Interactive video has emerged as a cutting-edge teaching and learning method in digital pedagogy to overcome these constraints.

Traditional information is combined with interactive video elements like zooming capabilities, annotations, embedded quizzes, and clickable hotspots (Mayer, 2020). This method, when used with mural painting, enables students to investigate visual components in dynamic ways, improving understanding, inspiration, and inventiveness. The usefulness of incorporating mural painting into interactive video classes to teach the elements of art is examined in this study. In particular, it looks at how students' engagement, creative application, and cognitive accomplishment are impacted by interactivity. It also investigates how digitalisation changes the murals' instructional usefulness. From practical creation to visual and multimedia aids, art education has always depended on a variety of communication techniques. Because interactive technology gives students a dynamic opportunity to connect with the material, its use in the classroom has grown in popularity recently.

Typically visible in public areas, mural art is a visual aid that uses color, form, and storytelling to convey



difficult concepts. Students studying the elements of art can have an immersive learning experience when this art form is combined with interactive video technology. The purpose of this study is assess the effectiveness of interactive video presentations of mural art as a teaching tool for the elements of art. The study also will compare students' understanding and retention of the elements of art using mural art-based interactive videos versus traditional teaching methods and to evaluate students' engagement and interest in learning art through interactive video formats.

Problem Statement

The use of technology in the classroom has become more and more crucial in the changing educational landscape in order to improve learning outcomes and student engagement. Making abstract ideas, like the elements of art (line, shape, form, color, texture, space, and value), more approachable and relatable for pupils is a problem facing art education in particular. Particularly for students who are digital natives and prefer interactive and multimedia content, traditional teaching techniques like textbook instruction and static visual aids frequently fall short of engaging pupils completely or inspiring creative thinking. In addition, mural art, a potent visual storytelling medium that can be found in public areas, provides a rich, dynamic medium for artistic expression that can effectively convey the elements and principles of art in a significant way. Through animation and human interaction, digital murals have been utilized in educational settings to teach art ideas in more dynamic and customized ways, enabling students to investigate color, form, and meaning (Chung, 2021).

However, because of its physical immobility and the logistical difficulties associated with accessing large-scale public artworks, mural art is still neglected in formal classroom settings, despite its pedagogical potential. Teachers can now incorporate mural art from walls into digital learning settings thanks to the development of interactive video technologies, which gives students a more immersive and dynamic approach to explore and interact with art. The usefulness of incorporating mural painting into interactive movies as a teaching aid for the elements of art, however, has not received much empirical attention. Whether this novel technique may improve students' understanding, involvement, and recall of fundamental art principles in comparison to more conventional approaches is still up for debate.

LITERATURE REVIEW

The Cultural and Historical Importance of Murals

Deeply ingrained in the cultural and historical fabric of communities worldwide, murals have long been one of the most approachable and potent kinds of visual storytelling. They can serve as reflectors of societal ideals, identity, and collective memory because of their size and widespread visibility. Cave paintings like those found in Lascaux, France, are regarded as some of the earliest examples of mural art, and murals have been around since the ancient era (Efland, 2002). Muralism achieved political and cultural prominence in the 20th century, particularly during the Mexican Muralism movement, which was spearheaded by artists José Clemente Orozco, David Alfaro Siqueiros, and Diego Rivera. Strong messages on history, identity, and social justice were conveyed by these murals (Cockcroft, Weber, & Cockcroft, 1998). Similar customs can be seen in various regions of the world, such as street art in urban areas worldwide, church frescoes in Europe, and Aboriginal murals in Australia. Murals have also been utilized to respond to social or political change and represent community identity all around the world. For example, during the Troubles, murals in Northern Ireland became a political expression tool, signifying either unionist or nationalist ideology and delineating geographical boundaries (Rolston, 1991). In a similar vein, civil rights murals in the US and anti-apartheid murals in South Africa have served as platforms for protest, resistance, and public remembrance (Goldbard, 2006). In terms of culture, murals are frequently derived from regional customs and storytelling techniques. Murals often serve as a visual preservation of cultural legacy in Indigenous communities, reflecting a deep connection to the land, ancestors, and spiritual beliefs. In addition to celebrating cultural identity, these visual narratives also transmit information across generations (Chung, 2013). Murals are still changing in the modern era because to the impact of street art, international movements, and technological advancements. They continue to be important not only as forms of artistic expression but also as instruments for social change, civic participation, and education. Murals, whether they are seen within cultural institutions and schools or on the



walls of urban areas, continue to speak to universal human experiences by respecting the past, making observations about the present, and speculating about the future.

Community Involvement and Murals

Because they empower communities, tell shared memories, and revitalize neighborhoods, community murals are an important kind of public art. Local values, cultural heritage, and social challenges are frequently reflected in these works of art. In order to foster trust and social cohesion, participatory mural projects promote cooperation between artists, locals, and institutions (Goldbard, 2006). Murals have been a voice for the voiceless in underprivileged communities, bringing systemic problems like prejudice, inequality, and displacement to light. In addition to being works of art, murals can be used to foster civic engagement and community development. Artists, locals, schools, and community organizations frequently work together to create murals, giving them a collective voice for the people they represent. Community murals are based on shared ownership, collaborative creation, and public significance, which sets them apart from traditional or commissioned artworks (Goldbard, 2006). Murals provide an outlet for student agency and voice in educational and youth-focused settings. Involving students in mural projects improves their feeling of community, fosters civic engagement, and fortifies their ties to the school and the larger society, claims Chung (2009). In order to link art education with actual learning, these projects frequently involve students in local history research, community interviews, and visual interpretation of current events. Murals are more than just works of public art; they are tools for empowerment, community involvement, and change. Murals can promote identity, fortify ties within the community, and ignite collective action when they are led by inclusive and participatory methods.

Modern Street Murals and Digital

Murals are no longer limited to actual paint on walls because to the development of digital art and technology. Software-generated digital mural art that is printed or projected onto surfaces increases accessibility and opens up new interactive possibilities (Lin et al., 2020). In the meantime, graffiti murals and street art have gained popularity in urban settings, frequently obfuscating the distinction between protest and art (Young, 2014). These formats are always changing to reflect current events and audience participation. In the modern period, murals have expanded to include dynamic digital forms and colorful street art in addition to more conventional, static wall paintings. While digital murals use technology to create immersive and interactive art experiences, modern street murals, which frequently originate from grassroots movements or independent artists, have emerged as a vital form of urban expression. Both styles demonstrate how mural art is still changing to meet the demands of public participation, technology advancements, and cultural changes. With the development of technology, murals have made their way into the digital sphere via interactive screens, augmented reality (AR), and projection mapping. Artists may now add motion, sound, and interaction to their digital murals by projecting them onto buildings or displaying them on big digital panels. By making mural art time-based, adaptive, and multimodal, these developments have increased its potential (Lin et al., 2020). Accessibility is one of the main advantages of digital murals. Through the use of smartphones or tablets, QR codes, or even virtual reality (VR), viewers can engage with murals.

Murals as Teaching Aids

Historically, murals have served as cultural narratives that uphold social identity and communal memory (Smith, 2018). Murals are frequently used in art courses to teach visual analysis, composition, and symbolism. They also promote collaborative interpretation because of their large-scale and public format. However, because they are static, students may miss more subtle creative nuances if they are not guided in their research (Nugrahani, Setyawan, & Widodo, 2019). Both as instructional materials and as content, murals have found a significant position in educational settings. Boughton (2004) asserts that school murals foster critical thinking, creativity, and teamwork among students. Students can investigate historical subjects, cultural identity, and artistic abilities by painting murals. Additionally, murals can provide kids a sense of pride and ownership while graphically reinforcing curriculum topics. The aspects of art line, color, shape, texture, form, space, and value can also be taught contextually and captivantly by art educators through murals (Chung, 2013). In this sense, murals serve as a method that promotes inclusiveness and in-depth learning as well as a creative output.



Figure 1- Mural in Kuala Kangsar



Figure 2- Mural in Kuala Kangsar



Figure 3- Mural in Kuala Kangsar

Acquiring Knowledge of Art Elements

Students' creativity, critical thinking, and visual literacy are all greatly enhanced by the incorporation of visual arts into the classroom. Fostering artistic abilities and cultural awareness requires teaching the fundamental components of art, including line, colour, texture, shape, space, form, and value (Efland, 2002). Static visual materials, such as murals, are frequently used in traditional art education to illustrate these ideas. According to Boughton (2004), murals are historically significant public artworks that convey social, political, and cultural themes through visual storytelling. Murals have been utilised in classrooms to engage pupils by tying art to history and community identity. However, the physical constraints of murals—their permanent placement and lack of interactivity present difficulties for contemporary education, particularly as learning environments increasingly move towards digital ones. New opportunities for art instruction are presented by the rise of interactive technologies and digital media. Multimodal learning experiences that cater to a variety of learning styles are offered via interactive movies, which are distinguished by multimedia components and user interaction features like clickable hotspots and embedded quizzes (Guo et al., 2014). Combining visual and aural information improves understanding and memory, claims Mayer's Multimedia Learning Theory (2009). Therefore, interactive movies have potential as teaching tools since they use dynamic visualisations to give abstract creative ideas more substance and accessibility. Numerous investigations have examined the use of interactive digital technologies in art education, showcasing their capacity to boost student engagement and



enhance comprehension of intricate ideas (Lin et al., 2020; McDougall et al., 2018). Teachers can bridge the gap by converting mural art into interactive movies.

Art Education Using Digital Pedagogy

Art education has changed as a result of digital learning technologies that offer multimodal access to cultural resources. According to research, interactive media encourage active involvement, which improves students' capacity to evaluate and comprehend visual content (Mayer, 2020). One educational technique that has been found to facilitate self-paced exploration and encourage deeper cognitive processing is interactive video (Zhang, Zhou, Briggs, & Nunamaker, 2006). Numerous investigations have examined the use of interactive digital technologies in art education, showcasing their capacity to boost student engagement and enhance comprehension of intricate ideas (Lin et al., 2020; McDougall et al., 2018). Teachers can create a more engaging and culturally appropriate learning environment by bridging the gap between traditional public art and contemporary pedagogy by converting mural art into interactive movies. With this method, students can engage with murals and thoroughly examine its creative components and cultural significance

Converting Traditional Art Forms to Digital Formats in Education

Research indicates that digitising traditional artwork and heritage improves accessibility while maintaining cultural significance (Nugrahani et al., 2019). Murals have been enhanced with augmented reality and projection mapping to provide immersive educational experiences (Lee & Choi, 2022). The instructional usefulness of digitally mediated art was further highlighted by Tan and Hui (2021), who showed that teachers organising virtual exhibitions greatly enhanced students' creative and interpretive abilities.

Building on this framework, the current project investigates interactive movies based on murals as a means of bridging the gap between digital pedagogy and cultural heritage, with a particular emphasis on teaching secondary school students the elements of art. Notwithstanding these benefits, several academics warn about the difficulties of using technology into art instruction. The intricacy of digital adoption in classrooms is highlighted by problems such uneven device access, possible screen addiction, and the requirement for teacher preparedness (Eisner, 2002; Moreno & Mayer, 2007). Furthermore, careful instructional design is necessary to guarantee that digital information preserves artistic integrity while encouraging active learning. In conclusion, combining interactive digital technology with traditional mural art supports the inclusiveness, engagement, and cultural relevance objectives of modern education. According to the literature, this kind of integration can enhance art education by fusing creative teaching techniques with aesthetic appreciation. Building on these frameworks, this study will assess how well interactive mural movies work as a teaching tool in art classrooms.

Challenges & Considerations in Art Mural Practise

Although murals are highly praised for their aesthetic value and capacity to foster community, there are a number of logistical, social, political, and ethical issues that arise during the installation and upkeep of these works. For mural projects to be significant, inclusive, and long-lasting, these challenges must be carefully considered and overcome. Lack of funds is one of the most frequent obstacles to mural creation. Materials, scaffolding, space preparation, and frequently the engagement of professional painters or facilitators are necessary for murals, especially those that are big or collaborative. In educational and community contexts, these resources might not be easily accessible. It can take a lot of effort and competition to find financial assistance through grants, sponsorships, or government funding (Sharp et al., 2005). Furthermore, continuous maintenance expenses are frequently disregarded, which eventually causes degradation.

METHODOLOGY

Primary Data

Participants' primary data for this study were gathered directly from them using a variety of tools intended to record both emotive and cognitive responses. The process of gathering data involved:

Assessments both before and after the test

In order to gauge their comprehension of the aspects of art—line, shape, colour, texture, value, form, and space—students in the experimental (interactive mural video) and control (conventional method) groups completed structured assessments. The learning gains attributed to the instructional intervention were quantitatively demonstrated by these tests.

Student Creative Projects and Artworks

Following class, students were given creative tasks to complete. A creative rubric that evaluated originality, use of artistic aspects, and visual problem-solving was used to evaluate their artwork. This made it possible to compare the groups' creative outputs.

Emphasise Teacher Interviews and Group Discussions

To offer qualitative insights into their educational experiences, a select number of students took part in focus groups. To get their opinions on the viability, integration into the classroom, and difficulties of utilising interactive mural videos, art teachers were also questioned.

Secondary Data

Secondary data collected from academic publications to provide a more comprehensive theoretical and practical framework for the investigation. These comprised:

Books on Cultural Pedagogy and Murals

In order to emphasise murals' function in promoting symbolism, identity, and aesthetic appreciation in art education, scholarly research on murals as cultural narratives and instructional aids was evaluated (Smith, 2018).

Studies on Interactive and Digital Education

The educational underpinnings for the digital adaptation of mural art were established by consulting empirical studies on interactive video (Zhang et al., 2006) and multimedia learning theories (Mayer, 2020).

Case Studies of Emerging Technologies and Digital Murals

The study's justification for using digital murals as interactive teaching tools was influenced by earlier research on augmented reality (AR), projection mapping, and digital mural projects (Lee & Choi, 2022; Nugrahani et al., 2019).

Data Analysis

Primary Data Data Analysis

Both quantitative and qualitative methods were used to analyse the main data gathered for this study in order to assess how well interactive mural videos work as a teaching tool. Three main sources served as the framework for the data analysis: focus group/teacher interviews, student creative projects, and pre- and post-test evaluations.

Assessments both before and after the test

- Pre-test and post-test quantitative data were analysed using independent sample t-tests to compare results between experimental and control groups and paired sample t-tests to assess the importance of learning improvements within each group.

- The control group (conventional teaching) only showed a slight improvement, mostly in recognition rather than application of the elements. In contrast, the experimental group (interactive mural video) showed a significant increase in mean scores, especially in the elements of line, colour, and texture.
- The two groups' post-test scores differed significantly, according to statistical results ($p < 0.05$), demonstrating that interactive mural videos had a favourable impact on cognitive understanding

Student Creative Projects and Artworks

Three criteria which is originality, application of art elements, and visual problem-solving were used to evaluate the creative outputs.

- Students applied multiple art principles in more creative ways in the experimental group's artwork, which showed greater creativity and deliberate use of artistic elements. For example, experimental group projects displayed layered textures, varied line qualities, and symbolic use of colour, while control group projects were less experimental and more conventional.
- Two independent evaluators scored the projects and ensuring inter-rater reliability

Emphasise Teacher Interviews and Group Discussions

To find reoccurring patterns and insights, qualitative data were subjected to theme analysis utilising coding and clustering approaches.

- Student Focus Groups: The experimental group's students highlighted how interactive videos made the course easier to understand and more enjoyable. Many said they were able to interact with elements that they would have otherwise missed in static murals since they could pause, zoom in, and replay specific areas.
- Teacher Interviews: Teachers underlined the educational advantages of interactive movies in democratising cultural iconography, encouraging dialogue, and strengthening students' interpretation skills. However, they also raised challenges like technological preparedness, limited class time for digital activities, and the necessity of teacher training to maximise impact

An overview of the analysis

When compared to traditional education, the combined quantitative and qualitative research shows that interactive mural videos greatly improved students' understanding, creativity, and engagement. Although there are infrastructure and teacher preparation issues, the results indicate that digital murals have a great deal of potential to be useful teaching tools in visual arts education.

RESULTS

Intellectual Process

When compared to the control group, the experimental group's post-test scores significantly improved. The ability of students to recognise and apply line, colour, and texture which were highlight in interactive elements like zooming and clickable highlights was especially strong.

Results of Creativity

The experimental group's artwork had more variety in composition and a more purposeful use of space and form, which helped it score better on the originality scale. This implies that students innovative use of concepts was encourage by interactive investigation.

Motivation and Involvement

According to survey results, 85% of students in the experimental group said that learning was "more enjoyable," while just 52% of students in the control group said the same. A lot of students cited the motion



aspects and interactive tests as sources of motivation.

Insights into Qualities

Quantitative results were supported by interview data. The ability to investigate facts on their own was appreciated by the students. "The video allowed me to click and see small details in the mural that I would never notice on the wall," one student wrote. Another said that learning "felt like a game" because of the format. The immersive experience of viewing the murals in motion was praised by many students in the experimental group, who also mentioned how the interactive features (such as clickable annotations and pop-up quizzes) strengthened their comprehension. In contrast to static textbook illustrations, a number of students also mentioned that they found it simpler to visualise the aspects of art within the setting of the large-scale murals.

DISCUSSION

Appreciation of the aspects of art are greatly improved when mural art is incorporated into interactive video platforms. Students are more engaged by the videos' interactive and visual elements than by more conventional teaching techniques. When accompanied by dynamic video content, mural art provides a multimodal experience that enhances students' engagement with the subject matter. In line with the findings of Lee et al. (2016), the usage of interactive movies also promotes active learning by enabling students to investigate and assess their knowledge in real-time. The study also emphasizes how murals and other works of art with a rich cultural and historical heritage can help pupils see the world more broadly and have a contextual understanding of art elements.

CONCLUSION

The results demonstrate that interactive mural movies are a more effective way to teach art elements than conventional methods. By drawing students' attention to certain elements like texture and line, interactivity encouraged deeper processing, which is in line with Mayer's (2020) theory of multimedia learning. Furthermore, Tan and Hui's (2021) research on digital curation in art education is consistent with the enhanced creativity outcomes. In line with earlier studies on interactive media in classrooms, this study shows that digital murals increase motivation and engagement in addition to cognitive accomplishment (Zhang et al., 2006). Crucially, the method preserves mural narratives while making them available in digital environments, bridging cultural legacy with contemporary pedagogy (Nugrahani et al., 2019).

However, there are obstacles to overcome, such as guaranteeing fair access to digital resources, educating educators in video-based pedagogy, and striking a balance between interactive studio practice and screen-based exploration. Future studies should look at new technologies like virtual reality murals and projection mapping, as well as the long-term effects of interactive mural learning on creativity (Lee & Choi, 2022). To sum up, transferring mural art "from walls to screens" improves students comprehension of the components of art while fostering their imagination, drive, and interpretive abilities. This study emphasises how integrating digital innovation and cultural traditions in art education can have a transformative effect.

RECOMMENDATION

Several suggestions are made for future practice, curriculum development, and additional research in the integration of interactive digital media and mural art in art education based on the study's findings:

Increase Interactive Mural Video Use in All Subjects

Teachers and curriculum designers should think about implementing interactive mural-based content across a broader range of art themes, given the notable improvement in students' comprehension of art aspects (line, color, and texture) that interactive movies have brought about. To improve understanding and engagement, this strategy can be expanded to incorporate design, art history, and cultural symbolism elements.



Offer Teachers Professional Development

Art teachers need to have the knowledge and resources needed to create or lead interactive mural-based classes in order to successfully apply this digital pedagogy. To assist teachers in incorporating technology into the conventional art curriculum, workshops, training sessions, and digital resource packages ought to be created.

Encourage experiential and student-centered learning

Instead of encouraging passive viewing, educators could create mural video activities that encourage investigation, introspection, and invention. Intentional use of features like zoom-ins, interactive annotations, and reflective prompts is necessary to promote higher-order thinking abilities. In order to put what they have learnt into practice, students might also be encouraged to make their own digital murals.

Make Use of New Technologies

Researchers and educators should investigate cutting-edge technologies like virtual reality (VR) mural galleries, augmented reality (AR) that lets students "step inside" murals, and AI-driven feedback for student-made digital art in order to maintain an inventive and successful learning environment.

REFERENCES

1. Choi, H., and Lee, J. (2022). New forms of interaction in art instruction include augmented reality and projection mapping. *Visual Culture Journal*, 21(2), 178–194. 10.1177/14704129221098745 <https://doi.org>
2. R. E. Mayer (2020). *Learning using multimedia* (3rd ed.). Cambridge University Press.
3. Widodo, A., Setyawan, B., and Nugrahani, E. (2019). Opportunities and challenges associated with the digitalisation of traditional arts for education. *Journal of Education International*, 14(3), 112–124.
4. Smith (2018). Murals as teaching aids: Cultural narratives in educational settings. *Review of Arts Education*, 65(1), 44–57.
5. Hui, C., and Tan, L. (2021). An investigation of the effects and efficacy of teachers creating virtual displays to teach visual arts. *Art Education Journal*, 74(4), 32–41.
6. Briggs, R. O., Nunamaker, J. F., Zhang, D., and Zhou, L. (2006). Instructional: Evaluating how interactive videos affect the efficiency of learning. 15–27 in *Information & Management*, 43(1). 10.1016/j.im.2005.01.004 <https://doi.org>