



## Cognitive Flexibility as a Bridge: Examining the Impact of Digital Exposure and Artistic Creativity on Abstract Art Appreciation

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### ABSTRACT

The widespread adoption of digital platforms, from social media to virtual exhibitions, has reshaped how abstract art is experienced, revealing a need to understand how digital exposure and artistic creativity influence interpretation. This conceptual study therefore proposes a framework that positions cognitive flexibility as a key mediator in appreciating non-representational works. Employing a synthesis of existing literature rather than collecting new data, it does not present empirical findings. Consequently, no direct research results are reported. The proposed framework suggests that digital exposure broadens visual familiarity, while creativity fosters open-ended interpretation, with cognitive flexibility integrating these factors for deeper engagement. These insights hold practical implications for art education, digital curation, and museum engagement, and future research should test and refine this framework—through cross-cultural comparisons, longitudinal designs, or intervention-based studies—to clarify how digital interaction fosters adaptive appreciation of abstract art.

**KEYWORDS:** Abstract Art, Digital Exposure, Artistic Creativity, Cognitive Flexibility, Art Appreciation.

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### INTRODUCTION

#### Background of the Study

Unlike representational forms, abstract art directly invites the viewer to interpret it, analytically and emotionally, with authentic, flexible thought. It asks audiences to not take things literally and instead engage with visual composition and texture and color arrangements in deriving meaning (Bimler et al., 2019). Yet the way in which researchers appreciate abstract art differs greatly between individuals because of differences in cognitive, experiential and social facets. The bulk of traditional research has examined art education and individual characteristics (e.g., openness to experience) as predictors of aesthetic appreciation. However, the contemporary digital landscape has altered the ways users partake in and evaluate art, requiring a reevaluation of the cognitive and social processes that underlie abstract art consumption.

The merging of digital platforms, such as online galleries, social media, and virtual exhibitions, has transformed the ways of art exposure, where people can access different art styles without the limitations of traditional galleries and museums (Jonaskaite et al., 2022). This digital transition is giving rise to new modalities of learning that shape the way in which a person develops a sense of visual literacy and appreciation of abstract art (Miyamoto & Wang, 2024). Simultaneously, artistic creativity, the potential to produce and delve into new artistic expressions, is also a major influence on one's relationship to abstract forms. The artists/creative people were much more flexible in their cognitive performance, so they interpreted ambiguous artistic stimuli in different/unique ways (Stoyanova & Antova, 2020)

However, there has been insufficient research thus far on the interplay between cognitive processes in abstract art appreciation and new media exposure and conceptual engagement. Existing literature has largely examined digital art engagement in a standalone context, or with a predominant emphasis on conservative educational capital (Nash, 2017). Therefore, the aim of this article is to formulate a theoretical framework encompassing digital exposure, artistic creativity and cognitive flexibility as the main parameters of the appreciation of abstract art among Chinese students in Beijing.

#### Problem Statement & Research Gaps

Past research mentioned the impact of various elements on art appreciation, but the researches so far has not looked into how exposure through digital forms and imagination through art induce together to establish the process involved in abstract art interpretation. While digital platforms have emerged as significant domains of art consumption, their effects on students' perception of and appreciation for abstract art are still unexamined (Thomson-Jones, 2021). While students are highly consumed with online galleries and social media-based art experiences, it is important to examine the impact of digital interactions on their hermeneutic skills and cognitive continuity (Li, 2022). Moreover, artistic creative thinking is also a foundational element of cognitive flexibility, the ability to change mental gears and embrace the ambiguity of things, such as watching abstract art (Ishizaki & Wang, 2021). However, researchers have not sufficiently investigated the degree to which artistic creativity enhances cognitive flexibility and whether this would, in turn, enhance abstract art appreciation. Moreover, cognitive flexibility was nominated as an important element in problem-solving and adaptive thinking but has not been systematically explored as a mediating role between digital exposure, artistic creativity, and abstract art appreciation (Serban

Von Davier, 2023). Exploring these connections can offer novel insights into the role of digital engagement and creativity in the interpretation of art, which has been a major gap in literature.

Furthermore, cognitive flexibility, both as an underlying ability that is necessary for it and as an outcome of creative thinking in arts, is a central mechanism by which artistic creativity will promote the ability to switch in reasoning and handle contradictory stimulus like abstract art (Ishiguro & Okada, 2019). Nonetheless, the direct relationship between creative ability (i.e., artistic creativity) and cognitive flexibility and, in turn, abstract art appreciation are not yet fully explored. Moreover, cognitive flexibility has been recognized as an essential mechanism in problem-solving and adaptive thinking but lacks a thorough examination as a mediating variable between digital exposure, artistic creativity, and abstract art appreciation (Miyamoto & Wang, 2024). Filling in these gaps will help create a more holistic picture of how digital and creative experiences shape students' engagement with abstract art.

### Research Objectives

Building on the problem statement and research gaps, this study aims to achieve the following objectives:

- **RO1:** To examine how digital exposure and artistic creativity together impact the perception and appreciation of abstract art among university art students in Beijing.
- **RO2:** To investigate the ways digital exposure influences cognitive flexibility in the context of abstract art engagement.
- **RO3:** To determine how artistic creativity enhances cognitive flexibility and shapes abstract art appreciation.
- **RO4:** To assess whether cognitive flexibility mediates the relationship between digital exposure, artistic creativity, and abstract art appreciation.

### Research Questions

This conceptual paper seeks to answer the following research questions:

- **RQ1:** How does digital exposure to art and artistic creativity influence the perception and appreciation of abstract art among university art students in Beijing?
- **RQ2:** How does digital exposure to art contribute to cognitive flexibility in university art students?
- **RQ3:** How does artistic creativity enhance cognitive flexibility and influence abstract art appreciation?
- **RQ4:** Does cognitive flexibility mediate the relationship between digital exposure to art, artistic creativity, and abstract art appreciation?

### Significance of the Study

The findings of this study are of considerable theoretical and practical significance for art appreciation and art education. Conceptually, it widens the scope of abstract art perception theory by adding digital exposure and cognitive flexibility as a key element of art engagement. Utilizing Social Cognitive Theory (Bandura, 1986) and Cognitive Flexibility Theory (Spiro et al., 1988), this paper offers a new conceptual framework for understanding the synergistic dynamics between digital exposure, artistic creativity, cognitive adaptability, and artistic interpretation. Moreover, it contributes to research on cognitive flexibility as an important determinant of responses to abstract artistic stimuli.

From a practical point of view, this study shows a direct relationship with art education and digital art interaction. Digital tools also help educators or educational institutions use such as virtual art galleries, and interactive online learning environments that foster cognitive flexibility and enhance students' engagement with abstract compositions. Integrating digital resources into art education encourages students to think critically and stimulates creative problem solving. Finally, such research can inform digital art initiatives, museums, and cultural organizations and may argue for tools that make abstract artworks feel relevant in an interactive, immersive environment; when individuals pay with their time and attention, they want to do something that makes it matter. Underline the role AI-generated curation and VR experiences play in the creation of rich, interactive art landscapes that feel accessible and dynamic online. In turn, by providing these contributions, this paper intends to move the needle closer to connecting theoretical knowledge and its practical expression and ensuring that distorted appreciation of abstract art progresses into new spheres through onto the open highways of the digital age.

The results of this study, from a practical perspective, have clear implications for art education and engagement with digital art. As well as providing more abstract compositions, educators and institutions can use digital tools, for instance virtual art galleries and interactive online learning environments, that could encourage cognitive flexibility and improve engagement with the abstract amongst students. Thus, these new forms of aesthetic expression can invite students to create and imagine new possibilities when engaging with digital resources as part of their art curricula, thereby facilitating critical engagement and deeper interpretative processes. In addition, this research highlights practical implications for digital art platforms and cultural organizations, suggesting a positive relationship between interaction design and engagement with abstract art through interactive and immersive tools. These findings emphasize the need for AI-assisted curation as well as virtual reality (VR) to produce creative, inclusive, and enhanced digital art experiences. In doing so, this paper attempts to reconcile theoretical frameworks with real-world application, noting the ongoing development of abstract art appreciation despite the digital shift.

## **DETERMINANTS OF ABSTRACT ART PERCEPTION AND APPRECIATION**

### **Digital Exposure to Art and Perception & Appreciation of Abstract Art**

Digital platforms (e.g., social media, online galleries, virtual museums) have broadened how individuals encounter and interpret abstract art, surpassing the constraints of traditional museums (Jonauskaitė et al., 2022; Miyamoto & Wang, 2024). Features such as zooming, filtering, and AI-based recommendations can heighten viewers' immersion, with repeated online interactions encouraging greater comfort with non-representational works. However, over-saturation and rapid scrolling risk superficial engagement, where art can be consumed passively without deep contemplation (Böthig & Hayn-Leichsenring, 2017; Nash, 2017).

### **Artistic Creativity and Perception & Appreciation of Abstract Art**

As a value, artistic creativity helps promote abstractionism as it encourages individuals to embrace ambiguity and transcend customary representational cues (Deng & Pei, 2021). Abstract pieces allow people who are very creative to generate many interpretations and more emotional investment (Abe & Fukushima, 2020). This process frequently represents a superimposition of personal significance, which in turn can enhance the intellectual- and affective-resonance (Bimler et al., 2019) But other audience members may find abstract works less accessible, resulting in their distancing or disengaging (Gonigroszek & Szmigiero, 2021).

### **Digital Exposure, Artistic Creativity, and Cognitive Flexibility**

Cognitive flexibility, or the ability to shift across perspectives and build new meanings, is enriched by both digital exposure and artistic creativity (Spiro et al., 1988; Nash, 2017). The wide artistic styles accessible online enhances novel interpretative schemas of viewers, and creativity facilitates openness to ambiguity (Deng & Pei, 2021). Collectively these strategies cultivate the adaptive mindset that is key to interact meaningfully with complex visual forms.

### **Cognitive Flexibility and Perception & Appreciation of Abstract Art**

High cognitive flexibility promotes dynamic interactions with abstract art by allowing viewers to re-interpret ambiguous stimuli, sustaining engaged interest (Sekutowicz et al., 2016). This flexibility allows the same or similar works to be visited multiple times, each time revealing different insights (Suhaili, Nagy, & Juhász, 2024). Further neuroaesthetic research has revealed that greater functional activation of the relevant brain regions predicts higher degrees of flexibility and suggest deeper perceptual and emotional engagement with non-representational art (Gonigroszek & Szmigiero, 2021).

### **The Mediation Effect of Cognitive Flexibility**

Cognitive flexibility is introduced as a plausible variable that mediates a relationship between digital enculturation and abstract art appreciation through artistic creativity (Miyamoto & Wang, 2024). Even though digital platforms can provide multiple stimuli, exploration may be limited by lack of flexibility and different cognitive forms without external connectedness (Nash, 2017; Deng & Pei, 2021). This at the capacity to combine multiple perspectives eventually sustains deeper, more contemplative engagement with non-representational works.

## **THEORETICAL FRAMEWORK AND CONCEPTUAL FOUNDATION OF THE STUDY**

### **Theoretical Foundation**

Using Social Cognitive Theory (Bandura, 1986) and Cognitive Flexibility Theory (Spiro et al., 1988), this research provides a theoretical framework for exploring the associations between digital access, creative artistic skills, cognitive flexibility and abstract art perceived and appreciated. These theories can explain the effects of the interaction with the abstract art in digital environments and how creativity enhances flexible thinking, while cognitive flexibility serves as a mediator in the relationships.

Through observational learning in digital environments, Social Cognitive Theory provides a framework for understanding the process of digital exposure to art, particularly for individuals in the general population. Cognitive Flexibility Theory (CFT) explains artistic creativity by suggesting that creative thinking allows people to hold multiple frames of reference, giving them a greater connection to abstract compositions. Indeed, cognitive flexibility acts as a mediator between exposure to digital content, and the implications of artistic creativity in this study, whereby it can facilitate the understanding and contextualization of abstract art stimuli by producing new cognitive interpretations of the symbol-laden artwork.

### **Social Cognitive Theory**

SCT uses observational learning and social interactions to argue how people gain knowledge, skills, and behaviors (Bandura, 1986). This theory could be used to understand the established rationale as it applies to abstract compositions. With art being seen in a digital realm now, such as through online galleries, Instagram, and virtual exhibitions, the idea of processing, interpreting, and eventually developing an appreciation for a particular composition stems from this idea of aesthetic ideas and how individuals engage with piece by spending time with it.

As SCT implies, this learning process happens vicariously: viewing someone else interacting with a particular subject and absorbing ways of making interpretations. In the age of digital, art appreciation is filtering through as much online exposure where one learnt through interplay with artists, curators, and communities. The more people explore different artist styles in digital worlds, the more confident they feel in recognizing abstract artworks (Jonauskaitė et al., 2022). This corresponds with SCT's definition of self-efficacy that having wide exposure produces higher assurance on how to deal with complex understandable artistic expressions (Miyamoto & Wang, 2024).

Moreover, SCT focuses on the reciprocal determinism where the behaviors, cognitive processes, and environment of an individual mutually influence each other [13]. Interactivity through digital exposure provides the opportunity for learners to develop visual literacy, pattern recognition, and appreciation of abstract art as the digital medium promotes experiences with non-representational composition done with repetition. Through the same process, the interpretative frameworks of people expand, allowing individuals to transcend their initial discomfort with abstraction in order to engage with it on deeper cognitive level (Nash, 2017).

The various components needed to utilize Social Cognitive Theory to approach the phenomenon of digital exposure as an influence to develop an appreciation of abstract art lay the foundation for understanding how abstract art is shaped by digital exposure through individuals' observational learning, self-efficacy, and cognitive adaptability in an online space.

### Cognitive Flexibility Theory

Cognitive Flexibility Theory (CFT) is the ability to adapt the analytical lens based on current study conceptual framework, or paradigm, when approaching a new area, problem, or opportunity (Spiro et al., 1988). This theory is especially applicable to artistic creativity, which necessitates a dialectical process of divergent thinking, experimental exploration and tolerance of diverse viewpoints, to create original work.

From the perspective of appreciation of abstract artworks, the creativity of artistic activities helps participants to have an open-ended and flexible mindset in perceiving works, which allows them to be more comfortable with uncertainty and vagueness (Deng & Pei, 2021). Creative-minded persons leverage off non-rigid writes through synthesizing vision interpretations to frame topic within indeterminate constructs. This process reaffirms CFT's claim that cognitive flexibility helps us to make sense of ill-structured areas, such as abstract art, where set explanations cannot be employed (Abe & Fukushima, 2020).

Through artistic creativity, cognitive exploration is also encouraged, as people immerse themselves in these abstractions, presenting concepts from different angles, reconstructing them through different motifs and building their own storylines. This open and adaptable participation deepens interpretive engagement, leading creative individuals to appreciate the depth of abstract works and look beyond the mere aesthetics of a painting (Bimler, Snellock, & Paramei, 2019).

Theories of cognitive flexibility also detail how artistic creativity itself can enhance cognitive flexibility. By going through artistic processes, individuals are trained to shift their mental gears of ideas, perspectives, and interpretations, helping them reorganize their understanding of abstract ontologies (Suhaili et al., 2024). This indicates that artistic creativity not only enhances engagement with the vanishingly rarefied concept of abstract art, but expands the cognitive skill set required for adaptive interpretation.

Indeed, Cognitive Flexibility Theory (Spiro et al., 1988) serves as a theoretical basis for the relationship between artistic creativity and engagement with abstract art, purporting that noticing there is more than a singular path (the ambiguity) — the “chaotic” interaction — leads to perceiving art abstractly and creatively.

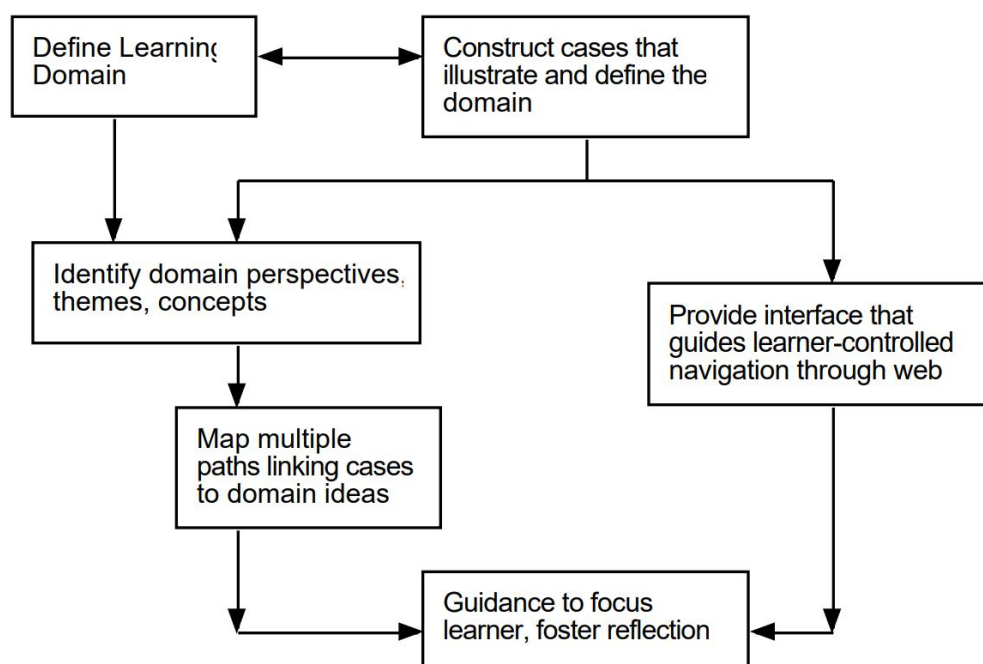


Figure 1. Knowledge web design with Cognitive Flexibility Theory (Siegel et al., 2000).

### Cognitive Flexibility as a Mediator

Digital exposure fosters a path of artistic creativity through a key mediator of cognitive flexibility leading to perception and appreciation of abstract art. Digital exposure introduces individuals to a plethora of artistic styles and interpretative approaches; artistic creativity provides them the capability to explore and generate new ideas; however, cognitive flexibility is the mechanism that leads individuals to effectively process and integrate these experiences into meaningful interpretations.

According to SCT, users who experience many forms of abstract pieces through the internet, are forced to be more open minded and engage in innovative thought as they view pieces with new approaches, in compositions that are non-traditional, and that may not follow traditional art theory (Miyamoto & Wang, 2024). Exposure to different perspectives trains the brain to transition back and forward and create a more fluid interpretative process (Nash, 2017).

Likewise, CFT states that artistic creativity cultivates cognition-flexibility through divergent thinking, overcoming fixed interpretations, and integrating multiple perspectives (Deng & Pei, 2021). Highly creative individuals are more capable of constructing multi-layered meanings when viewing abstract art, enabling them to engage more deeply with abstract compositions (Bimler, Snelllock, & Pamei, 2019).

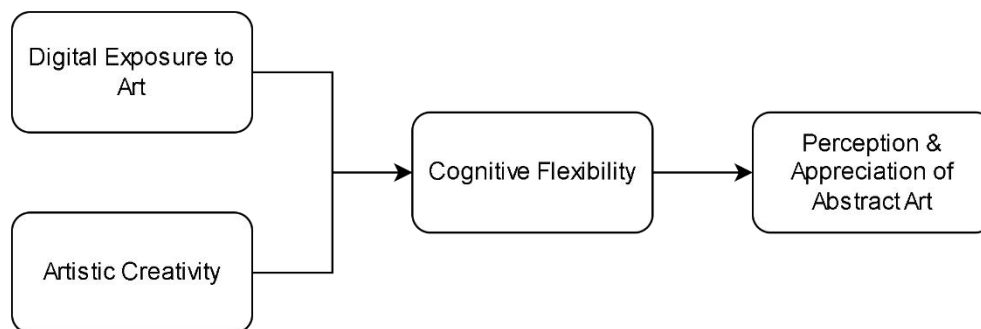
Cognitive flexibility, therefore, serves as a cognitive bridge that mediates the relationship between the effects of digital exposure and artistic creativity on the appreciation of abstract art. When coupled with high cognitive flexibility, reconstructing and reframing abstract compositions will enhance perception and appreciation for individuals who actively engage in digital exposure and demonstrate strong artistic creativity (Suhaili, Nagy, & Juhász, 2024).

### Theoretical Integration

By integrating Social Cognitive Theory and Cognitive Flexibility Theory, this study develops a framework that explains how digital exposure and artistic creativity shape abstract art appreciation through the mediating role of cognitive flexibility.

- Social Cognitive Theory explains how digital exposure enhances art perception and appreciation by fostering observational learning, self-efficacy, and exposure to diverse artistic interpretations.
- Cognitive Flexibility Theory explains how artistic creativity fosters interpretative flexibility, enabling individuals to process abstract compositions in dynamic and adaptive ways.
- Cognitive flexibility acts as a mediator, enhancing the effect of digital exposure and artistic creativity on abstract art appreciation by allowing individuals to transition fluidly between different interpretative approaches.
- This theoretical foundation supports the study's conceptual framework, which examines the direct and mediated effects of digital exposure and artistic creativity on abstract art perception and appreciation.

### Conceptual Framework



*Figure 2: Conceptual Framework*

## METHODOLOGY

This conceptual paper adopts a theoretical research design to explore how digital exposure and artistic creativity influence abstract art appreciation, with cognitive flexibility as a central mediator. Rather than collecting new primary data, it synthesizes extant theories and empirical evidence—rooted in Social Cognitive Theory and Cognitive Flexibility Theory—to develop a structured model for future empirical testing. By mapping out the potential interplay among digital exposure, artistic creativity, cognitive flexibility, and abstract art appreciation, the study provides a conceptual foundation for understanding how non-representational artworks might be interpreted in contemporary digital contexts.

Although no empirical work is carried out here, subsequent research could target university art students, who regularly interact with abstract art in digital settings. Sample sizes may be determined via Krejcie and Morgan's (1970) table, while purposive and stratified random sampling help capture diverse creativity levels and online engagement. Standardized instruments—such as the Cognitive Flexibility Inventory, creativity self-assessments, and art appreciation measures—could be paired with

structural equation modeling or mediation analyses to validate the proposed relationships. Mixed methods approach, including experimental tasks and qualitative interviews, may also yield deeper insights into how digital experiences shape interpretative skills.

Conceptual research is warranted when an integrated framework is lacking, enabling the identification of theoretical gaps and the proposition of fresh perspectives without presenting new data. By extending Social Cognitive Theory and linking it to Cognitive Flexibility Theory within the realm of digital art appreciation, this paper advances understanding of how creative thinking, adaptive cognition, and media-driven exposure collectively inform responses to abstract art. Its synthesized model and recommendations offer a springboard for future empirical inquiries, cross-cultural investigations, and intervention-based studies in art education, digital curation, and museum practice

## DISCUSSION AND IMPLICATIONS

This section discusses the theoretical and practical implications of the conceptual framework proposed in this study. The integration of Social Cognitive Theory (Bandura, 1986) and Cognitive Flexibility Theory (Spiro et al., 1988) provides insights into how digital exposure to art and artistic creativity influence the perception and appreciation of abstract art through cognitive flexibility as a mediator. The discussion is structured into subsections that address theoretical contributions, practical implications, and directions for future research.

### Theoretical Contributions

By establishing a theoretical basis that bridges objectives of research domains such as digital learning environments, creativity and cognition in the context of art consumption, this study makes it possible for the academic to increase the information of their research in the field of art appreciation, cognitive psychology and digital interaction. It connects the concepts of different degrees of digital exposure, creativity, and cognitive flexibility to establish their collective impact on the appreciation of abstract art, filling a gap in literature.

Such exposure is confirmed to support interpretative engagement as it provides various art stimuli, enough interactive learning opportunities, and social exposure to expert reviews- all of which work as prompts to appreciate the artwork. According to the Social Cognitive Theory, individuals learn artistic knowledge by viewing other artists' work on the web (Murray, 2023), and this interaction increases their confidence in approaching abstract compositions. The kind of open-ended, flexible thinking that artistic creativity allows for is necessary to get researcher head around ambiguous, potentially non-representational artworks. Creativity, according to Cognitive Flexibility Theory, encourages perspective-shifting, problem-solving, and the ability to extract new meaning out of abstract stimuli.

Insights of the present study reveal that a mediating role between digital exposure, artistic craftsmanship and abstracted painting element in visual performance was fulfilled by cognitive flexibility. The current study departs from previous research that has looked at these relationships in isolation although none have previously shown that cognitive flexibility is the underlying mechanism through which digital engagement and creative tendencies are transformed into meaningful artistic appreciation. This broadens existing theories by establishing cognitive adaptability as an essential aspect of art perception in contemporary digital spaces.

### Practical Implications

Beyond theoretical advancements, this study has significant practical implications for art education, digital art platforms, and creative training programs.

### Implications for Art Education

These findings demonstrate that art educators need to be aware of the efficiency of digital exposure strategies and integrate them in art classes to enrich students' experiences in abstract compositions. Virtual museum trips, AI art-enhancing suggestions, and interactive online curation projects can give students an acquaintance with abstract shape and form while giving their drawn observation skills a workout. Furthermore, learning assignments need to be designed creatively, allowing flexibility in how interpretations arrived through multiple interpretations of the same abstract piece, using various artistic styles and with available digital tools to reconfigure existing pieces.

Moreover, art teachers should appropriately promote cognitive flexibility by organizing problem-solving tasks, creative story writing, and reflective discussions on abstract art perception. Teaching students to return and reframe their interpretations in motion is one way to prepare them to more readily interpret complex and ambiguous compositions.

### Implications for Digital Art Platforms & Museums

To increase user engagement with abstract art in digital art platforms and virtual museums, utilize personalization through recommendation systems, interactive learning, and AI-driven curation. Through customizable exploration of abstract works, guided conversations in virtual spaces, and playful experimentation with abstraction concepts in community contexts, technology can transform the way individuals experience and understand modern art. Digital engagement elements, such as user-created artworks based on their interpretation of the piece, VR art showcases, or online discussions led by experts, can extend these affordances into online spaces, while supporting social learning and interpretive confidence. Museums and cultural institutions may similarly benefit from these findings by creating digital experiences that promote active

rather than passive attendance to abstract works. Gamification strategies, collective art interpretation activities, and AI-based artwork interpretation software can help reinforce visitors' dynamic and flexible understanding and enjoyment of abstract art.

### Directions for Future Research

This conceptual paper lays a solid groundwork, but empirical validation using quantitative and qualitative studies is the next step. Confirming the relationships among digital exposure, artistic creativity, cognitive flexibility, and appreciation of abstract art via the proposed framework through Structural Equation Modeling (SEM) and mediation analysis can be tested. Though the conceptual model is largely supported by secondary data, collecting primary data through surveys from university art students, or users of digital art would help ground the model in this domain and provide hard evidence for or against it.

Longitudinal studies of digital art platforms may also determine whether the effects of the digital art platforms studied here will improve over time by engaging with neuronal growth. Since cognitive flexibility can be learnt through practice, long-term investigations into differences in interpretation would insight how different types of digital learning environments affect the perception of art. Further, cross-cultural studies may investigate the effects of digital exposure and artistic creativity on abstract art preference among different cultures, yielding results on whether cognitive flexibility operates in a similar capacity across different arts traditions and educational systems.

Research based on interventions in art education could also examine whether activities that enhance cognitive flexibility and creativity improvement allow students to engage more effectively with and be able to cognitively retrieve abstract art. Programs like creativity workshops, digital curation assignments and interactive art interpretation exercises could measure if such experiences of participatory learning led to cognitive openness and increase in artistic perception.

Finally, with emerging technologies such as AI, AR, and VR being integrated into the digital art experience, future research can develop frameworks to reflect how these tools will influence cognitive flexibility and engagement with more abstract pieces. Contributions to these arenas, such as constant AI content generation or VR shows, only seem to drive this trend towards art with an emphasis on how readily a viewer can experience it by providing e.g simple digital galleries or hinge on digital consumption at a certain level.

This study argues that any future exploration of big behaviors should highlight empirical testing followed by longitudinal studies, cross-cultural comparisons, intervention-based research and studies of tech impact. Responding to these gaps will enhance the robustness of the conceptual framework and the field's understanding of the potential mechanisms behind the impact of digital exposure and creativity on abstract art appreciation via cognitive flexibility.

### CONCLUSION

Therefore, this study contributes a new theoretical model detailing the cognitive and artistic mechanics of how abstract art is appreciated in the age of the algorithm. Integrating Social Cognitive Theory and Cognitive Flexibility Theory, this study initially recognizes the importance of digital exposure, creativity, and cognitive flexibility styles for how an individual creates visual abstract composition. The results inform the fields of art education, digital curation strategies, and aesthetic psychology, providing concrete applications for educational settings, digital platforms, and museums. Overall, the article serves as a call to action for continued exploration and development of artistic engagement strategies in the face of rapid technological advancements, paving the way for further investigation into the intersection of art, culture, and science. Our theoretical framework stands as a scaffold upon which to build conceptual and practical understanding of how the interaction between abstraction, viewer and the solid, permanent, unchanging nature of art interacts to create meaning; how artistic meaning in terms of abstraction can influence the world around us.

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