

# Exploring a Visual Interactive Strategy for Aesthetics Learning through Visual Essays and Interactive Quizzes

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## Abstract

Although visual literacy, multimedia learning, and digital interactivity have received considerable scholarly attention, their integration within university aesthetics education remains underexplored. This study explores a Visual Interactive Strategy that integrates visual essays and interactive visual quizzes into aesthetics learning. An interpretive qualitative approach with a single-case study design was employed in an Aesthetics course involving fourth-semester Visual Arts Education students at Universitas Negeri Makassar. Data were generated from classroom observations, learning documentation, student responses and reflections, interactive visual quiz outputs, and visual essay artefacts, and were analysed using reflexive thematic analysis. Four themes emerged: visual representations connected abstract aesthetic concepts with students' concrete experiences; interactive activities repositioned students as active participants in interpretation; visual essays supported a shift from reproducing theoretical knowledge to constructing visual-conceptual arguments; and engagement extended beyond verbal participation to encompass multiple modes of expression. Divergent evidence indicated that some students required scaffolding to progress from description to critical aesthetic interpretation and that the novelty of the digital format could have influenced initial enthusiasm. These findings informed the conceptualisation of the Visual Interactive Strategy as four interrelated processes: Visual Encounter, Conceptual Association, Interactive Response, and Reflective Articulation. The study offers a pedagogical framework for connecting aesthetic theory, visual literacy, interaction, and reflection in visual arts higher education. It also

highlights the importance of interpretive scaffolding and the need for longitudinal and comparative research to examine the strategy further.

**Keywords:** Aesthetics Education; Visual Interactive Strategy; Visual Essays; Interactive Visual Quizzes; Visual Literacy

## INTRODUCTION

Digital transformation has altered how students encounter, organise, and communicate knowledge in higher education. Academic information is no longer encountered only through written language but increasingly through images, video, illustration, animation, visualisation, social media, and other multimodal forms. Within this environment, visual literacy is not simply an auxiliary skill; it involves the capacity to interpret, evaluate, and communicate meaning through visual forms (Kędra, 2018). Visual analysis in higher education can also support students in translating what they see into reasoned interpretation rather than treating images as self-evident illustrations (Abas, 2019).

This issue is particularly important in visual arts education, where students routinely work with artworks, design, photography, film, illustration, digital media, and contemporary visual culture. Research has shown that visual resources can support academic understanding, reflective thinking, and knowledge construction (Cuna & Huang, 2023; Guglietti, 2023). In art and design education, visual instruction has been associated with deeper engagement with complex technical material, while sensory and multimodal approaches can broaden how students take ownership of theoretical and cultural texts (Lau et al., 2021; Matthews, 2021). Digital art-learning environments have further expanded opportunities for expression, appreciation, and creative participation (Charters & Murphy, 2021; Lim, 2022; Tam, 2023).

These concerns are directly relevant to aesthetics education. Aesthetics addresses aesthetic experience, beauty, perception, judgement, art, and the relationships through which people make sense of artistic phenomena. Yet because its concepts are abstract, the subject can easily become dominated by definitions, philosophers, textual explanations, quotations, and conventional written assignments. In such conditions, students may remember terminology without necessarily being able to use aesthetic concepts to read artworks or contemporary visual phenomena.

This problem was evident in the Aesthetics course that forms the case for this study. The course was offered to fourth-semester students in two classes of approximately 30 students each through a team-teaching system. Preliminary observation of learning activities, teaching materials, and student assignments showed continuing reliance on verbal explanation, text-heavy PowerPoint presentations, reading material, and written theoretical tasks. Visual and interactive activities had not yet become a central mechanism for understanding aesthetic concepts. This created a pedagogical distance between an abstract theoretical subject and students whose disciplinary practice is fundamentally visual.

The issue, therefore, is not merely insufficient technology use. Moving text from a book to a screen does not necessarily transform learning. Cognitive Theory of Multimedia Learning argues that meaningful multimedia learning requires active selection, organisation, and integration of verbal and pictorial representations within the limited capacity of human information processing (Mayer, 2021; Mayer & Fiorella, 2021). Similarly, the educational value of digital environments depends on how technological affordances are integrated into learning activities rather than on technology alone (Hutain & Michinov, 2022; Wang et al., 2022). Digital learning can support engagement, but it can also generate distraction or superficial interaction if activity is not pedagogically directed (Bergdahl et al., 2020; Liao & Wu, 2022).

From this position, the present study uses the term Visual Interactive Strategy to describe a pedagogical configuration that connects concepts, visual representations, interpretation, and interaction. It is operationalised through two main components. The visual essay combines concise theoretical explanation with artworks, visual culture, and student-generated visual-conceptual argumentation. The interactive visual quiz uses images and simple visual cases as stimuli for identification, comparison, application, and interpretation of aesthetic concepts. The strategy therefore treats visual material as an object of thought rather than as decorative support.

Previous research provides a strong foundation for this approach but also reveals a gap. Studies of visual literacy have emphasised the importance of interpreting and communicating visual information in higher education and arts-related contexts (Aji, 2021; González-Zamar et al., 2023; Prameswari et al., 2023). Studies of arts learning have highlighted creative, sensory, multimodal, and digitally mediated learning (Green, 2021; Lim, 2022; Matthews, 2021; Tam, 2023). Other research has shown that digital quizzes and

interaction can support formative assessment and engagement (Gherghel et al., 2023; Hutain & Michinov, 2022; Zainuddin et al., 2020). However, these strands are commonly treated separately, and relatively little research explains how visual representation, aesthetic theory, and interactive digital response can be organised together within university aesthetics learning.

The novelty of this study lies not in claiming a new digital tool but in examining Visual Interactive Strategy as a pedagogical relationship between visual encounter, conceptual association, interactive response, and reflective articulation. This perspective is grounded primarily in Cognitive Theory of Multimedia Learning and visual literacy scholarship. In this qualitative study, these frameworks are used as interpretive lenses rather than as variables for statistical measurement. The study therefore asks how students encounter aesthetic theory when it is reorganised through visual and interactive experiences, how those experiences shape forms of participation and interpretation, and what limitations become visible during implementation.

Accordingly, this study aims to describe and understand students' experiences of Visual Interactive Strategy in aesthetics learning, to explore how visual essays and interactive visual quizzes support connections between aesthetic theory and visual experience, and to identify the opportunities and limitations of the strategy within visual arts higher education.

## **METHODS**

### **Type of Research**

This study employed an interpretive qualitative approach. A qualitative orientation was selected because the purpose was not to test the statistical effectiveness of a learning medium but to understand students' experiences, responses, interpretations, and forms of engagement when a Visual Interactive Strategy was introduced into an Aesthetics course. The study therefore focused on meaning, process, context, and variation in experience rather than on causal estimation.

### **Research Design**

A single qualitative case study design was used, with the Aesthetics course in the Visual Arts Education Study Program at Universitas Negeri Makassar treated as the bounded case. The case was examined during one implementation period in which the Visual

Interactive Strategy was introduced. The design proceeded through three connected stages: exploration of the initial learning context; implementation of the strategy through visual essays, selected artworks and visual phenomena, interpretive questions, and interactive visual quizzes; and exploration of the resulting student experiences through observation, documentation, learning artefacts, and reflective responses.

The first stage documented the pre-existing pattern of teaching through classroom observation, review of PowerPoint materials, and examination of conventional theoretical assignments. The second stage reorganised selected aesthetics content through visual examples and interactive activities. The third stage examined how students responded to those activities, including their ability to connect visual stimuli with aesthetic concepts, their participation in quizzes and discussion, and the nature of their visual-essay artefacts. The design positioned the learning experience as a contextual phenomenon rather than a variable treatment.

### **Participants and Sampling Technique**

The case involved fourth-semester Visual Arts Education students enrolled in the Aesthetics course. The course consisted of two classes, each with 30 students. All enrolled students participated in the instructional context and classroom observation. Because the analysis was qualitative, participants were not treated as a statistically representative sample; instead, the study examined the range of responses and artefacts generated within the bounded course context. Student identities were anonymised in the analysis and reporting.

### **Instruments and Data Collection**

Data were generated from four complementary sources. First, open classroom observation was used to document attention to visual stimuli, participation in interactive quizzes, willingness to offer interpretations, classroom discussion, and the ways students related visual objects to aesthetic concepts. Second, learning documentation included teaching materials before and during implementation, visual-essay templates, screenshots of the interactive quizzes, photographs of classroom activities, and reflective teaching notes. Third, student artefacts included visual essays and quiz responses, which were examined as evidence of how aesthetic concepts were applied to visual objects. Fourth, student responses and reflections expressed during learning and evaluation activities were used to contextualise observable patterns.

Data collection was sequential but overlapping. Initial materials and classroom practices were first documented to establish the learning context. Observation and digital outputs were then collected during implementation. Visual essays and reflective responses were examined after the learning activities to identify how students represented the relationship between concept and image. The use of multiple sources allowed engagement to be examined beyond verbal participation alone.

### **Trustworthiness and Ethical Considerations**

Trustworthiness was strengthened through source and technique triangulation. Observational records were compared with quiz outputs, visual-essay artefacts, documentation, and reflective responses. Divergent cases were retained rather than removed from the thematic account, including students who remained hesitant to speak, artefacts that stayed descriptive rather than interpretive, and indications that novelty of the medium influenced some reactions. The researcher also maintained reflective notes to make interpretive decisions visible and to distinguish observation from theoretical explanation. The study used anonymised student data for scholarly reporting, and no personally identifying information is presented in this manuscript.

### **Data Analysis Technique**

Data were analysed using reflexive thematic analysis following Braun and Clarke (2021). Analysis involved repeated familiarisation with observational notes, documentation, quiz outputs, and student artefacts; generation of initial codes related to visual interpretation, conceptual connection, interaction, engagement, and difficulty; grouping of related codes into candidate themes; review of themes against the full dataset; definition and naming of themes; and interpretive writing. The analysis was primarily inductive, while multimedia learning and visual literacy functioned as sensitising concepts during interpretation rather than as predetermined coding categories. This process produced four themes and a set of divergent findings reported below.

## **RESULTS**

The analysis generated four main themes: (1) visual representation as a bridge between aesthetic theory and concrete experience; (2) interactivity as an activation of participation; (3) the visual essay as a movement from theoretical reproduction toward

interpretation; and (4) student engagement as multimodal rather than exclusively verbal. The analysis also identified divergent evidence that qualified the dominant patterns.

### **Visual Representation as a Bridge between Aesthetic Theory and Concrete Experience**

During implementation, abstract aesthetics content was presented alongside artworks, visual design, illustration, and examples of everyday visual culture. Students were invited to observe, compare, and comment on these visual objects before and during conceptual explanation. Classroom records indicated that students more readily related aesthetic concepts to visual phenomena encountered in daily life when the concepts were anchored to concrete examples. More students also attempted to express opinions about the displayed objects than under the previous text-dominant format.

The pattern was not uniform. Some students quickly identified a relationship between a visual stimulus and an aesthetic concept, while others required additional examples, simpler guiding questions, or further explanation. The data therefore showed visual stimuli functioning as an entry point to interpretation rather than as a guarantee of equivalent conceptual depth across students.

### **Interactivity Repositioned Students from Recipients to Participants**

Interactive visual quizzes were embedded within the learning sequence rather than used only at the end of instruction. Questions included images, visual comparisons, and simple cases that required students to select or justify a conceptual response. Observation records showed more visible answering, discussion, and willingness to offer viewpoints during these activities. The classroom sequence increasingly followed a pattern of seeing, responding, discussing, and reconnecting the visual object with an aesthetic concept.

However, participation remained uneven. Several students hesitated to speak when asked for an open visual interpretation, particularly because they were not accustomed to a learning format that demanded immediate public response. Quiz responses also varied: some students made concept–visual connections quickly, whereas others needed additional prompts. These variations show that interactivity emerged from the combination of visual stimulus, questioning, discussion, and feedback rather than from the digital interface alone.

## Visual Essays Supported a Shift from Theoretical Reproduction toward Interpretation

The visual-essay task asked students to select an artwork, object, or visual phenomenon and connect it to an aesthetic concept through a combination of visual material and concise written argument. The resulting artefacts showed two recurring response patterns. Some students moved beyond description and used aesthetic concepts to interpret the selected visual material, constructing a reasoned relationship between the visual object and theory. Others produced predominantly descriptive responses that identified visible features but did not yet develop a critical aesthetic interpretation.

**Table 1. Patterns of Student Responses in Visual Essays**

| Response Pattern        | Observed Characteristics                                                                                                |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Interpretive-conceptual | Connects the visual object with an aesthetic concept, develops reasons, and uses the image as evidence for an argument. |
| Descriptive-visual      | Describes visible features of the object, while conceptual connection remains limited or requires further scaffolding.  |

As shown in Table 1, the important difference was not whether students could notice visual features but whether they could use a concept to organise and justify an interpretation. The visual essay therefore made differences in interpretive depth more visible than conventional assignments that could be completed largely through reproduction of theoretical definitions.

## Student Engagement Was Multimodal and Not Always Verbal

The data also showed that engagement could not be inferred from speaking frequency alone. Some students who contributed little to whole-class discussion nevertheless participated consistently in the visual quiz, closely observed images, and produced substantive visual-essay work. Three forms of engagement were repeatedly visible: verbal engagement through questions and discussion; interactive-digital engagement through quiz responses; and reflective-visual engagement through the analysis and production of visual essays.

**Table 2. Main Themes Generated from the Qualitative Analysis**

| Theme                                               | Primary Evidence                                        | Empirical Pattern                                                                        |
|-----------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------|
| Visual representation bridges theory and experience | Artworks, design, illustration, everyday visual culture | Students increasingly connected aesthetic concepts with concrete visual experience.      |
| Interactivity activates participation               | Visual quizzes, questions, discussion                   | More visible responses and argumentation emerged during structured interactive activity. |

| Theme                                | Primary Evidence                                          | Empirical Pattern                                                                               |
|--------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Visual essays support interpretation | Image–text artefacts linked to aesthetic concepts         | Responses ranged from theoretical reproduction toward applied visual-conceptual interpretation. |
| Engagement is multimodal             | Discussion, digital responses, observation, visual essays | Participation was expressed verbally, digitally, and through reflective visual work.            |

Table 2 summarises the four themes without reducing engagement to a single behavioural indicator. In this case, learning participation was distributed across several communicative modes.

### Negative, Divergent, and Anomalous Findings

The data did not indicate that all students experienced the strategy in the same way. First, some remained hesitant to articulate interpretations publicly even when visual stimuli were available. Second, students differed in the speed and depth with which they connected visual objects to aesthetic concepts. Third, several visual essays remained descriptive rather than critically interpretive. Fourth, reflective notes indicated that some initial positive responses may have been influenced by the novelty of the visual-digital format itself rather than solely by conceptual understanding. A further practical anomaly concerned time: discussion and quiz activity sometimes expanded beyond the planned allocation, creating tension between conceptual explanation, interaction, and completion of the visual-essay briefing.

## DISCUSSION

### Analysis and Interpretation of Findings

The central finding is not simply that students preferred visual media, but that visual representation functioned as a mediator between abstract concepts and objects of experience. When aesthetic theory was placed alongside artworks, design, illustration, or familiar visual culture, students gained a concrete object through which a concept could be tested, discussed, and articulated. This finding addresses the research objective by showing how visual and interactive experience can reorganise the relationship between theory and interpretation in aesthetics learning.

From the perspective of Cognitive Theory of Multimedia Learning, the strength of the strategy lies in meaningful integration rather than in the quantity of images. Mayer (2021) and Mayer and Fiorella (2021) argue that learners must select relevant verbal and pictorial

information, organise it into coherent representations, and integrate those representations with prior knowledge. The present findings suggest a comparable process in aesthetics education: visual objects became useful when students were required to connect them explicitly with conceptual language. This also resonates with visual-literacy scholarship that frames visual understanding as interpretive and communicative competence rather than passive exposure (Abas, 2019; Kędra, 2018).

### **Comparison with Theories and Previous Literature**

The visual-essay findings are consistent with research showing that visual and multimodal tasks can extend academic meaning making. Cuna and Huang (2023) found that students use visual resources to support understanding and project development, while Guglietti (2023) reported that reflective visual journals can broaden visual thinking and multimodal literacy. In art and design education, Matthews (2021) similarly argues that theoretical texts can be appropriated through sensory and visual modes, and Lau et al. (2021) demonstrates the pedagogical value of visual instruction for complex learning. The present study extends these findings by showing how a visual essay can function specifically as a form of aesthetic argumentation: the learner must move from seeing an object to selecting a concept and constructing a reasoned relationship between the two.

The divergence between interpretive-conceptual and descriptive-visual responses is equally significant. It indicates that being an art student does not automatically guarantee advanced visual literacy. This pattern is consistent with studies that describe visual literacy as a competence requiring deliberate educational support (Aji, 2021; González-Zamar et al., 2023; Prameswari et al., 2023). Ahmedien (2026) likewise shows that structured visual-thinking activity can strengthen arts students' understanding of visual-literacy subcompetencies. In the present case, students who remained descriptive appeared to need scaffolding that gradually moves from observation toward conceptual explanation and justification.

The interactive-quiz findings also converge with research on formative digital interaction. Zainuddin et al. (2020) found that gamified e-quizzes can support formative assessment and student engagement, while Hutain and Michinov (2022) showed that the combination of presentation, questioning, and quiz functions can increase dimensions of engagement in face-to-face classes. Gherghel et al. (2023) further demonstrated the importance of interaction for online learning engagement. The distinctive contribution here

is the type of cognitive activity required: the quiz did not merely ask students to retrieve definitions but asked them to apply concepts to visual stimuli. It therefore operated as a space of conceptual activation.

The finding that engagement was not synonymous with speaking is supported by broader scholarship. Händel et al. (2022) showed that visual and verbal engagement in synchronous learning are only weakly related, demonstrating that different participation modes may follow different patterns. Bergdahl et al. (2020) likewise emphasise the multidimensional character of engagement in technology-mediated learning. Within the arts context, this study adds reflective-visual production as another participation mode: a student may be relatively quiet in discussion yet intellectually active through visual analysis and artefact production.

At the same time, the novelty effect recorded in the case prevents an overly technological interpretation. Digital interaction should not be equated with conceptual interaction. Research on multimodal and digital learning has repeatedly shown that technology can support engagement only when it is aligned with learning activity and can also generate distraction or extraneous processing (Liao & Wu, 2022; Seo et al., 2021). This reinforces the position that Visual Interactive Strategy is a pedagogical organisation rather than a particular application. Its educational value depends on whether the visual, question, discussion, and reflective task direct attention toward the aesthetic concept.

Findings from art and design education also support the importance of this pedagogical orientation. Charters and Murphy (2021) showed that moving art education online required pedagogical adaptation rather than simple transfer of existing practice. Lim (2022) demonstrated how digital augmentation can expand artistic expression and appreciation, while Tam (2023) showed that creative-thinking pedagogies can be purposefully integrated within higher-education visual arts courses. Green (2021) similarly argues for renewed attention to the conceptual domain of visual arts education. Together with the present findings, these studies suggest that the challenge is not choosing between conceptual and visual learning but constructing stronger relations between them.

The relevance of such integration also appears in Indonesian arts and education research. Ahmad and Julia (2022) emphasise the importance of varied learning media in art education, Aji (2021) positions visual literacy as a basis for critical photographic learning, and Park and Sohn (2023) demonstrate that digitally mediated art-history learning can shape

interaction and social presence. Wusqo et al. (2021), although situated in science education, further illustrates how visual-digital materials can contribute to visual-literacy development. Chatteur and Leppens (2023) and Schofield and Carvajal (2022) likewise show how visual and multimodal forms can serve as vehicles for complex meaning making in higher education.

### Conceptual Contribution: The Visual Interactive Strategy Framework

Synthesising the four themes, the Visual Interactive Strategy can be conceptualised as four interrelated processes: Visual Encounter, Conceptual Association, Interactive Response, and Reflective Articulation. Visual Encounter occurs when students attend to an artwork or visual phenomenon as an object of inquiry. Conceptual Association occurs when they connect that object with an aesthetic concept. Interactive Response occurs through questioning, comparison, quiz activity, or discussion. Reflective Articulation occurs when students consolidate and communicate their interpretation, particularly through a visual essay. These processes are recursive rather than strictly linear; students may return to the visual object after discussion or require conceptual clarification before they can articulate a reasoned interpretation.

**Table 3. Conceptual Structure of the Visual Interactive Strategy**

| Process                 | Core Activity                                           | Pedagogical Function                                        |
|-------------------------|---------------------------------------------------------|-------------------------------------------------------------|
| Visual Encounter        | Observing an artwork or visual phenomenon               | Provides a concrete object of aesthetic experience.         |
| Conceptual Association  | Connecting the visual object with aesthetic theory      | Activates theory as a tool for reading and interpretation.  |
| Interactive Response    | Answering, comparing, questioning, and discussing       | Externalises and tests conceptual interpretation.           |
| Reflective Articulation | Constructing a visual essay or reasoned visual response | Consolidates understanding into visual-conceptual argument. |

### Research Implications

Conceptually, the findings suggest that theory learning in the arts can be strengthened not by reducing theory but by changing how theory is encountered and used. Visual material can function as an object through which theoretical concepts are activated, while interactive response provides a transitional space between perception and reflective articulation. This framework contributes to discussions of multimedia learning by locating image–word integration within an interpretive arts context rather than primarily within factual or procedural learning.

Pedagogically, aesthetics teaching can be organised as a sequence of visual stimulus, interpretive questioning, conceptual clarification, application to a visual case, and reflective visual production. Such a sequence may also be relevant to art history, art criticism, visual appreciation, design theory, and visual-culture studies. Methodologically, the findings suggest that student engagement in arts learning should be evidenced through multiple sources. Observation of discussion alone can obscure students whose engagement is expressed digitally or through visual artefacts.

### **Research Limitations and Directions for Future Research**

This study has several limitations. It is based on one Aesthetics course in one study program; consequently, its findings are contextual rather than statistically generalisable. The researcher was also directly involved in implementation, which provided close access to the learning process but introduced the possibility of interpretive bias. The available documentation did not contain a complete, systematically coded corpus of individual student interviews; therefore, the account of experience relies primarily on observation, reflective responses, quiz outputs, and visual-essay artefacts. In addition, the novelty of the visual-digital format could not be fully separated from initial engagement, and the implementation period was too short to determine whether interpretive gains would persist over time.

Future research should use systematically recorded interviews or focus groups, extend observation longitudinally, and compare the strategy across different theoretical arts courses. Mixed-methods designs could further distinguish between media attractiveness, behavioural engagement, visual literacy, and conceptual understanding. Comparative studies could also examine whether the proposed four-process framework operates similarly across aesthetics, art history, criticism, design theory, and other visually oriented disciplines.

### **CONCLUSION**

This study explored how a Visual Interactive Strategy was experienced within university aesthetics learning. The findings show that visual representations can provide concrete anchors for abstract aesthetic concepts, interactive questioning and quizzes can activate participation, and visual essays can create a space in which students move from reproducing theoretical language toward applying concepts to visual objects. Student engagement was also multimodal: it appeared through speaking, digital response, sustained observation, and reflective visual production. At the same time, the strategy did not operate

uniformly. Some students still required scaffolding to move from description to interpretation, and initial enthusiasm may partly reflect the novelty of the medium.

The main contribution to knowledge is the formulation of Visual Interactive Strategy as a recursive pedagogical framework comprising Visual Encounter, Conceptual Association, Interactive Response, and Reflective Articulation. The framework shifts attention away from technology as innovation in itself and toward the organisation of relations between visual experience, conceptual knowledge, interaction, and reflection. It therefore offers a conceptual basis for rethinking theory-oriented learning in visual arts education.

Future research should test and refine this framework in other contexts, include systematically documented student voices, and employ longitudinal, comparative, or mixed-methods designs. Such work is needed to clarify the relationships among visual engagement, conceptual interpretation, visual literacy, and sustained learning beyond the initial introduction of a new digital format.

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