

How to Cite (APA Style):

Fajrie N., Mustofa H.A., & Adewale S. (2026). Exploring Visual Arts Creativity Through Papier-Mâché: Artistic Experiences in Mask-Making Among Elementary School Students. *Jurnal Ilmiah Pendidikan Dasar*, 13 (2), 412-436. <http://dx.doi.org/10.30659/pendas.13.2.412-436>

**JURNAL ILMIAH****PENDIDIKAN DASAR**

p-ISSN: 2354-9580
e-ISSN: 2685-211X

Exploring visual arts creativity through papier-mâché: artistic experiences in mask-making among elementary school students

Nur Fajrie¹, Hisbulloh Als Mustofa², Sulaimon Adewale³

¹ Master of Primary Education, Postgraduate Program, Universitas Muria Kudus, Indonesia

² Faculty of Science and Mathematics, Sultan Idris Education University, Malaysia

³ Department of Education Leadership and Management, University of South Africa, South Africa

Corresponding author's e-mail: nur.fajrie@umk.ac.id

Submitted: January 31st, 2026

DOI: 10.30659/pendas.13.2.65-83

Revised: July 14th, 2026

Accepted: July 31st, 2026

Keywords:		Abstract
visual education;	arts	<i>Visual arts education is fundamental to developing students' creativity and aesthetic awareness, yet instruction often remains confined to two-dimensional drawing and imitative tasks. This study aims to investigate the impact of papier-mâché mask-making on the artistic creativity and experiential engagement of elementary school students. Employing a mixed-methods sequential exploratory design, the research was conducted with 20 fourth-grade students at SD 3 Jepang, utilising classroom observations, interviews, and structured questionnaires to capture both the procedural and measurable aspects of artistic production. The findings reveal that students successfully navigated the stages of pre-creation, creation, and post-creation, demonstrating distinct individual expression and technical adaptation. Quantitative analysis corroborated these observations, indicating that students achieved a high level of creativity ($M = 77.90$) and a very high level of artistic experience ($M = 81.45$). The study concludes that the transformation of recyclable materials into three-dimensional forms effectively stimulates imaginative thinking and problem-solving abilities. Consequently, it is recommended that educators integrate exploratory, material-based projects into visual arts curricula to foster holistic creative development and enhance students' environmental consciousness.</i>
papier-mâché; creativity;		
artistic experience;		
elementary school		



INTRODUCTION

Background of the Study

Visual arts education in elementary schools serves as a foundational pillar for fostering students' creativity, aesthetic awareness, and the internalisation of cultural values derived from their immediate environment (Oliveira & Gillanders, [2024](#); Turan, [2023](#)). Through structured artistic activities, learners are guided to not only produce visual outputs but also to observe, evaluate, and appreciate diverse forms of expression (Batič et al., [2025](#)). These experiences are vital for developing emotional sensitivity and exploring original ideas from lived experience. Paper remains a historically significant and pedagogically relevant medium due to its accessibility and adaptability (Özden & Beriş, [2024](#); Rodgers, [2024](#)). In contemporary discourse, media like paper are no longer seen just as technical supports but as carriers of symbolic meaning. By transforming paper into three-dimensional forms through papier-mâché, students engage in a holistic creative process from material preparation to structural construction and decoration (Schiffer & Liu, [2024](#)). This transformation stimulates imaginative thinking and problem-solving, which are essential for long-term cognitive and expressive competence (González Moreno & Molero Jurado, [2023](#)).

The Problem of The Study

Despite its importance, visual arts instruction at the elementary level frequently remains stagnant, confined predominantly to two-dimensional drawing activities or the imitation of teacher-provided examples (Van de Kamp et al., [2022](#)). This "imitative" approach severely limits opportunities for independent exploration and creative autonomy. Furthermore, educators face significant pedagogical challenges, including difficulties in conveying abstract concepts, sustaining student motivation, and selecting instructional media that match students' developmental characteristics (Sickler-Voigt, [2026](#)). Without a shift toward exploratory, material-based projects, students lack the environment needed to activate their creative potential, often viewing art as a set of structured tasks rather than a medium for personal and emotional expression.

Research's State of the Art

Current research in visual arts education highlights a shift from traditional technical instruction toward media exploration and environmental consciousness. Recent studies emphasize that the "experience" of creation is as valuable as the final

product. While conventional studies focus on 2D results, contemporary literature explores how 3D construction fosters "planning imagination" and problem-solving.

Table 1. State of the Art in Visual Arts Education Research

Research Focus	Key Contributions	Relevance to Current Study
Art Appreciation	Focus on how 9–10-year-olds evaluate and appreciate diverse artistic forms (Herzog & Duh, 2020).	Foundation for the "Observing" indicator in the creativity questionnaire.
Materiality in Art	Exploring the pedagogical power of paper and its symbolic value (Özden & Beriş, 2024 ; Rodgers, 2024).	Justifies the selection of papier-mâché as a primary medium.
3D Construction	Utilizing papier-mâché and 3D printing for educational robotics and indigenous knowledge (Schiffer & Liu, 2024).	Supports the shift from 2D drawing to 3D form construction.
Creative Environments	The role of teachers as facilitators in providing supportive learning environments	Frames the researcher's role as an observer/facilitator in the mask-making process.

Novelty, Research Gap, & Objective

While existing literature extensively covers the importance of creativity and the technical use of paper (Chaoul, [2024](#); Özden & Beriş, [2024](#)), there is a distinct research gap concerning the specific "artistic experience" of elementary students when engaged in the three-dimensional transformation of recycled materials into culturally significant objects like masks. Most studies focus on either technical outcomes or purely qualitative reflections; few integrate a sequential exploratory design that quantifies artistic experience across the temporal stages of pre-creation, creation, and post-creation as conceptualized by. This study provides novelty by focusing on the "papier-mâché mask-making" intervention as a bridge between environmental stewardship and aesthetic character expression (Balfany, [2024](#)), specifically within the instructional context of fourth-grade students at SD 3 Jepang. By empowering students to move beyond imitative tasks (Van de Kamp et al., [2022](#)), this research addresses the need for supportive learning environments that foster holistic creative development.

The objectives of this research are as follows:

1. To explore and describe the artistic experiences of students across the pre-creation, creation, and post-creation stages.

2. To evaluate students' ability to navigate technical problem-solving and material adaptation during three-dimensional production.
3. To determine the level of students' engagement and aesthetic sensitivity when utilizing recycled materials for creative expression.

METHOD

Type and Design

This study employs a mixed-methods research approach utilizing a sequential exploratory design. This design was selected to facilitate a comprehensive investigation of students' artistic experiences, where qualitative exploration precedes and informs quantitative measurement. The rationale for this design lies in the necessity to first understand the complex, process-oriented nature of artistic creation specifically papier-mâché mask-making before assessing the magnitude of students' creativity and engagement levels. The research was conducted in two distinct phases. Phase one focused on the in-depth qualitative exploration of the artistic process, documenting how students conceptualized, constructed, and decorated their masks. Phase two was subsequently implemented to measure and validate findings regarding the levels of student creativity and artistic experience using standardized instruments. This sequential integration ensures that the statistical data are grounded in the specific pedagogical context and lived experiences of the participants.

Data and Data Sources

The research was conducted at SD 3 Jepang during the 2024/2025 academic year. The target population comprised fourth-grade elementary students engaged in three-dimensional visual arts instruction. The participants consisted of 20 fourth-grade students selected through total sampling, or saturation sampling, given that the study aims to evaluate classroom-based artistic interventions within a specific instructional cohort. This cohort was chosen based on their developmental readiness for complex manual tasks and their curricular requirement to engage with three-dimensional media. The researcher acted as an observer and facilitator, ensuring that the instructional environment remained conducive to naturalistic artistic inquiry.

The instruments developed for this study were designed to capture both the process and the product of artistic learning. For the qualitative phase, the researcher utilized observation guidelines, interview protocols, and documentation checklists. The observation guidelines were structured to record students' behaviors, interactions, and immediate responses during the mask-making process, while the

interview protocols were designed to elicit responses regarding students' understanding of the task, their intrinsic motivation, and their subjective artistic experiences.

For the quantitative phase, two specific questionnaires were employed namely the Student Creativity Questionnaire and the Artistic Experience Questionnaire. The Student Creativity Questionnaire was constructed around three primary indicators observing, understanding, and experiencing as seen on the table 1. These indicators measured the students' ability to attend to demonstrations, comprehend artistic concepts, and emotionally engage with the creative process. The Artistic Experience Questionnaire was developed to assess the students' engagement across three temporal stages of production in details can see in table 2. The pre-creation stage indicators measured prior artistic experience and motivation. The creation stage indicators assessed mastery of tools and materials, understanding of artistic techniques, communication skills, ability to express objects, and imaginative ability. Finally, the post-creation stage indicators evaluated the students' understanding of the production process and their ability to interpret and make meaning of their artworks.

Table 1. Structure of the Student Creativity Questionnaire

Variable	Indicator/Construct	Description of Measurement
Student Creativity	Observing	Measures the student's ability to attend to instructions, observe demonstrations carefully, and gain confidence in execution
	Understanding	Assesses the student's conceptual grasp of artistic creation, technical steps, and problem-solving abilities during production.
	Experiencing	Evaluates emotional engagement, aesthetic sensitivity, appreciation of peers' work, and the ability to communicate ideas.

Table 2. Structure of the Artistic Experience Questionnaire

Variable	Artistic Stage	Indicator/Construct
		1. Prior artistic experience

Artistic Experience (Junaedi, 2016)	Pre-Creation	2. Motivation for art-making
	Creation	3. Mastery of tools and materials 4. Understanding of artistic techniques 5. Communication skills 6. Ability to express objects or experiences 7. Imaginative ability
	Post-Creation	8. Understanding of the production process 9. Interpretation and meaning-making of artworks

Data Collection Technique

Data were collected using a multi-instrumental approach to ensure triangulation and data validity. Primary data were obtained through non-participant observation, semi-structured interviews, and questionnaire administration. In the non-participant observation, the researcher acted as an independent observer without direct involvement in the technical activity, focusing on documenting the nuances of the creation process. Interviews were conducted with both students and teachers to explore the underlying motivations and cognitive processes associated with the learning activities. Complementing these methods, secondary data were gathered through systematic documentation. This included photographs of learning activities, archives of students' final mask artworks, and supporting instructional records. As a data collection technique, documentation served as a systematic record of events presented in visual forms, reinforcing the empirical evidence derived from observations and interviews.

Data Analysis

Data analysis was conducted separately for the qualitative and quantitative strands, followed by an interpretative synthesis. Qualitative data analysis adhered to the interactive model proposed by Miles and Huberman. This process involved three concurrent flows of activity: data reduction, data display, and conclusion drawing or verification. Data reduction entailed selecting and focusing on information relevant to the research objectives, while data display was conducted through narrative descriptions to provide a comprehensive account of students' artistic experiences. The final stage involved drawing conclusions through iterative verification to ensure

that interpretations accurately reflected the empirical conditions observed in the field. Conversely, quantitative data obtained from the questionnaires were analyzed using descriptive statistics. This analysis focused on determining mean scores and frequency distributions to categorize students' levels of creativity and artistic experience into hierarchical levels, thereby corroborating the qualitative findings with numerical evidence of the intervention's effectiveness.

RESULTS

This section presents the empirical data obtained from the field in relation to the research questions. Qualitative data were collected through the stages of pre-creation, creation, and post-creation, conducted from 10 December to 21 December 2024. The analysis focuses on examining the process and outcomes of students' artistic creativity in fourth-grade students of SD 3 Jepang during the production of papier-mâché masks. The findings are derived from qualitative analysis using the Miles and Huberman model, aimed at interpreting observational and interview data related to students' levels of understanding and engagement throughout the creative process.

The Pre-Creation Stage: Conceptualization and Knowledge Building

The pre-creation stage represents the preparatory phase prior to the production of the artwork. This stage consisted of several key activities. First, initial interviews were conducted to explore students' prior artistic experiences, motivation for art-making, and their understanding of visual art creation, particularly mask art. This step was intended to identify students' baseline knowledge and attitudes toward artistic activities.

Second, the researcher provided art appreciation and conceptual introduction by presenting instructional material on mask-making through Microsoft PowerPoint, as seen in Figure 1. This activity aimed to equip students with foundational knowledge related to mask art, including its forms, aesthetic characteristics, tools and materials, production techniques, and creative possibilities. The presentation functioned as a cognitive stimulus to enhance students' awareness and readiness for the creative task.



Figure 1. Presentation of Pre-Creation Stage Material

Source: Pre-Creation Stage Documentation

The final activity in this stage involved idea visualization, in which students were asked to develop preliminary sketches of the masks they intended to create during the production stage. This sketching activity served as a medium for translating abstract ideas into visual form and encouraged students to articulate their creative intentions. This process validates the constructivist view that learning is not a passive reception of information but an activation of existing "schemata." As noted by, art is an experience rooted in the interaction between the live creature and their environment; the students' ability to recall mask forms from their daily lives demonstrates that their artistic potential is deeply embedded in their sociocultural context. By articulating intentions before engagement, students engaged in what terms "planning imagination," moving from abstract thought to concrete visual planning. Through this structured pre-creation process, students were expected to recall prior artistic knowledge, develop interest in papier-mâché mask-making, and cultivate intrinsic motivation to engage more actively in subsequent artistic practices.

The Creation Stage: Papier-Mâché Mask Production

The creation stage represents a structured sequence of activities in which students transformed previously developed ideas into tangible artworks. During this phase, students elaborated on their initial concepts by actively engaging their imagination and individual creativity throughout the artistic process. Prior to commencing the activity, the researcher and students participated in a brief collective prayer to ensure a conducive and orderly learning atmosphere. The activity was conducted in the classroom, where students were seated on the floor to allow greater freedom of movement and flexibility during the creative process.

In this visual arts activity, all students utilized papier-mâché as the primary medium for mask production. The creative process involved all 20 fourth-grade students of SD 3 Jepang, who participated actively in shaping, assembling, and refining their artworks. The use of a uniform material enabled a focused examination of individual creative variations in form, texture, and expression.

Throughout the creation stage, the researcher conducted systematic observations to examine students' creativity, comprehension, and engagement during the art-making process. Informal interviews were carried out to capture students' spontaneous reflections and responses, while documentation in the form of photographs and field notes was collected to support qualitative analysis. This stage was implemented over three to four instructional sessions and was organized into several sub-phases to ensure that students could complete the creative process effectively and reflectively.

Preparation of Tools and Materials

The first phase of the creation stage was the preparation phase. At this stage, the researcher guided students to prepare themselves and organize the necessary tools and materials, including used paper, water, glue, paint, spoons, bowls, brushes, and paint containers, as shown in Figure 2. Students' enthusiasm was evident as they collaboratively collected used paper and proudly displayed the materials they had gathered. Several students also asked about the functions of the available tools, indicating limited prior experience with the materials and equipment used in papier-mâché mask-making. The utilization of recycled paper here is significant, it positions this pedagogical approach within the current "state of the art" regarding Education for Sustainable Development (ESD). By repurposing waste paper, the activity transcends aesthetic education to become an act of environmental stewardship, aligning with recent trends in Eco-Art Pedagogy (Marquez-Borbon, [2024](#)).



Figure 2. Preparation of Tools and Materials

The Dynamics of Artistic Experience

The process of art-making constitutes a sequence of actions undertaken by individuals in the creation of a product or artwork. Every individual undergoes a creative or imaginative process that connects memory-based responses with stimuli from the surrounding environment. Athanasekou (2024) and Baldacchino (2024) emphasize that engagement in artistic creation provides children with opportunities to gain new experiences, expand knowledge, and enhance creative abilities. Creativity in art-making does not emerge solely at the moment when an idea is realized into a finished work; rather, it begins with students' prior knowledge, lived experiences, and intrinsic motivation to generate artistic ideas.

During the pre-creation stage, most students demonstrated direct experiences related to mask art, while a smaller number had indirect experiences. Personal experiences in artistic creation often lead to artworks characterized by aesthetic value and imaginative enjoyment. Interview findings revealed that direct experiences were obtained through activities such as wearing toy masks, encountering street vendors selling masks or mask paintings, watching local cultural performances such as parades or carnivals, observing mask decorations at home, or having previously made masks themselves. Indirect experiences were acquired through television programs depicting masked characters, online videos or images, and reading materials. Notably, a few students had no prior exposure to mask imagery or performances; however, upon viewing their peers' sketches, these students gained new experiences and attempted to replicate or reinterpret the designs.

Such varied experiences were found to stimulate students' curiosity and imagination in the art-making process. This finding aligns with those who assert that everyday activities play a significant role in shaping children's experiences. Environmental factors, personal interests, and motivation serve as influential elements in the development of students' creativity, particularly in fostering imaginative engagement in artistic creation. This corroborates Dewey's assertion that art is an "intensification of ordinary experience," rather than something separate from daily life.

Understanding Form and Function

Students demonstrated an understanding of masks as objects whose size and form resemble the human face. Mask artworks present visual form as a primary element and possess aesthetic value (Balfany, 2024). This understanding was reflected in students' ability to interpret masks during the creation process. Students' knowledge of mask art varied, encompassing perceptions of masks as performance

accessories, facial protection, or decorative objects. All students expressed interest in mask-making, albeit for different reasons. Schunk & DiBenedetto (2022) explain that motivation significantly influences an individual's engagement in an activity. Most students were motivated by curiosity and the desire to experience a new activity for the first time, while others were driven by the enjoyment of playful creation. A small number of students participated primarily due to instructional obligation. The majority had never attempted papier-mâché mask-making, although a few had previously made masks using simpler materials.

These findings underscore the importance of environment-based educational approaches in enhancing students' understanding of the functional value of recycled materials and their creative potential. One such approach is the creation of mask artworks using papier-mâché. In line with the study by the use of papier-mâché in art-making contributes to increasing students' awareness of paper waste utilization, promoting creative thinking skills, sharpening aesthetic sensitivity, and fostering an appreciation of the artistic creation process. Consequently, this approach not only nurtures students' imagination and motor skills but also enhances their awareness of the importance of exploring the surrounding environment as a source of creative inspiration.

Execution of Ideas and Coloring

The creation phase involved the realization of previously planned ideas or sketches. According to Wang & Ho (2021) the creation stage constitutes a series of processes designed to develop students' imagination and creativity in art-making. During this phase, students demonstrated diverse forms of creativity and imagination through unique approaches to papier-mâché mask design. These included constructing full-face or half-face masks, adding facial details such as eyes, noses, and mouths, and incorporating complementary elements such as horns or crown-like forms as mask accessories. Character design featuring varied animated cartoon traits has been shown to attract visual interest and influence individuals' attitudes and behavioral responses (Cai & Pu, 2026), a tendency that was also evident in students' expressive mask designs, as illustrated in Figure 3.



Figure 3. Process of Making and Painting a Paper Pulp Mask

The majority of students created masks inspired by popular cartoon characters they admired, such as heroic figures including Spider-Man and the Teenage Mutant Ninja Turtles, as well as humorous animal characters and other imaginative forms. Students demonstrated a strong tendency to imitate visual references they had previously observed. This finding aligns with statement that imagination develops through everyday experiences and imitation of visual stimuli encountered in one's environment. Critically, this behavior also aligns with theory of *Reproductive Imagination*. While some educators might view this imitation as a lack of originality, Vygotsky argues that reproduction is an essential scaffold for creativity; children must first mimic known cultural symbols before they can recombine them into new forms (*Combinatorial Imagination*). The prevalence of mass media characters in students' work further supports advocacy for Visual Culture Art Education (VCAE), showing that allowing students to use these cultural resources acts as a powerful motivator for engagement rather than a hindrance.

The mask-coloring activity emerged as one of the most engaging and enjoyable components of the creative process for students. During this stage, students freely experimented with color selection and combinations according to their individual creative preferences. Through the exploration of color and texture, students were able to develop their imagination, fine motor skills, and appreciation of artistic expression (Baigutov, 2024; Lu & Huang, 2024).

Moreover, the processes of mixing and combining colors, applying paint to the mask surface, and controlling the brush required sustained attention, patience, and precision. These activities contributed to the development of self-regulation and meticulousness, which are essential skills supporting students' cognitive and psychomotor development (Betancur et al., 2024). As such, the colouring stage functioned not only as an aesthetic enhancement of the artwork but also as a

pedagogical medium for strengthening key developmental competencies in elementary learners.

Visual Analysis of Representative Artworks

Analysis of Student Work Initials ARS

Based on the assessment of the artworks using the indicators of unity and emphasis, as presented in Figure 4, the masks demonstrated a high degree of visual coherence. The final mask forms were generally consistent with the initial sketches, with the eye areas intentionally painted in contrasting colors to create visual dominance and focal emphasis. The dimensions of the masks reflected appropriate proportions and rhythmic balance relative to the natural size of the human face. Overall, the integration of form, color, and texture appeared balanced and harmonious. The selection of colors and the direction of brush application were relatively systematic; however, minor technical inconsistencies were observed, particularly in the area beneath the eyes, where the paint application lacked refinement. Despite this limitation, the artworks effectively reflected students' understanding of basic visual principles and their ability to translate conceptual designs into three-dimensional artistic forms.



Figure 4. Process and Results of the mask by the initials ARS

Analysis of Student Work Initials AOA

Based on the evaluation of the artworks using the indicators of unity and harmony, as depicted in Figure 5, the masks demonstrated visual coherence and effectively attracted viewers' attention. In terms of balance and proportion, the overall performance was satisfactory, as the size and form were generally consistent with conventional mask structures. However, minor imbalances were observed in the

eye areas and at the lateral edges of the masks. These inconsistencies were evident in the unequal dimensions between the right and left sides, resulting in slight asymmetry. Regarding textural emphasis, the mask surfaces appeared somewhat coarse and lacked uniformity, indicating technical limitations in material application. Nevertheless, when assessed through the indicator of rhythm, the masks exhibited well-developed curved lines and appropriately scaled decorative elements in the upper sections. Overall, despite minor technical shortcomings, the artworks reflected students' emerging understanding of fundamental visual principles and their ability to apply them within three-dimensional art-making processes.



Figure 5. Process and Results of the Mask by the initials AOA

Analysis of Student Work Initials SANS

Based on the assessment using the indicators of unity and harmony, as displayed in Figure 6, the mask demonstrated strong visual quality. In terms of form and color, the artwork appeared coherent, aesthetically pleasing, and consistent with the original sketch. The indicator of emphasis was well achieved, as reflected in the smooth and neat texture of the mask surface, which was applied consistently throughout the work. The indicators of proportion and rhythm were also satisfactorily demonstrated. The size, facial structure, and decorative details were appropriately scaled, and the rhythmic arrangement of visual elements across the mask appeared orderly and balanced. However, the color selection showed limited contrast; the pink tones applied lacked brightness, resulting in a darker overall facial appearance. In addition, with respect to the indicator of balance, a slight imbalance was observed between form and color distribution. Despite these minor limitations, the artwork reflected a solid understanding of fundamental visual design principles

and an emerging capacity to integrate aesthetic considerations within three-dimensional art creation.



Figure 6. Process and Results of the mask by the initials SANS

Analysis of Student Work Initials SCS

Based on the assessment of the mask artwork using the indicators of unity and harmony, as seen in Figure 7, the overall composition appeared cohesive and visually engaging. The form and texture of the mask were generally well balanced; however, the color elements, particularly the combination of yellow, pink, and green, lacked visual equilibrium and required further refinement. In terms of rhythm and proportion, the relationship between the facial structure of the mask and the upper decorative elements was appropriately aligned. Nevertheless, improvements are needed regarding the thickness of the mask edges, and the eye dimensions should be adjusted to ensure symmetrical sizing. With respect to emphasis, the artwork demonstrated satisfactory focal quality, although the surface along the mask edges would benefit from additional smoothing to eliminate unevenness or waviness. Overall, while minor technical adjustments are necessary, the mask reflects a developing understanding of fundamental visual principles and demonstrates students' growing capacity to apply these principles in three-dimensional art creation.



Figure 7. Process and Results of the mask by the initials SCS

Analysis of Student Work Initials ANK

Based on the assessment using the indicators of unity and harmony, as shown in Figure 9, the overall form of the mask appeared cohesive and visually appealing. Balance was generally evident in the texture and color elements; however, an imbalance was observed in the eye structure, as the spacing between the eyes was uneven. This resulted from one eye being positioned slightly lower than the other, causing a lack of horizontal alignment. The indicator of emphasis was well achieved, as the final mask corresponded closely with the initial sketch. In terms of proportion, the artwork demonstrated strong visual accuracy, with the sizes of the ears, eyes, and nose appearing consistent and well proportioned relative to one another. With respect to rhythm, the arrangement of visual elements appeared less orderly, particularly in the coloring process. The pink color applied to the cheeks was insufficiently visible, and several areas of the mask remained unpainted, resulting in visible white sections. These inconsistencies were attributed to irregular painting rhythms, leading to uneven color distribution and a less optimal overall finish. Despite these limitations, the artwork reflects students' developing technical control and an emerging understanding of visual organization in three-dimensional art-making.



Figure 8. Process and Results of the mask by the initials ANK

Synthesis of Visual Analysis

Overall, it can be concluded that the students were able to complete papier-mâché mask artworks through diverse creative processes, shaped by their initial ideas, methods of idea development, and individual approaches to artistic realization. Each artwork reflected students' personal expression, stylistic preferences, and understanding of character representation. This finding is consistent with the study by which emphasizes that project-based art learning fosters active engagement and creativity among students. Authentic, hands-on learning experiences enrich students' sensory perception and aesthetic sensitivity. Furthermore, students' motivation and imagination are effectively stimulated when they are provided with opportunities to explore artistic creation freely. This correlates with recent trends in "New Materialism," which posit that materials are not passive recipients of human will but active participants in the creative process. The students learned to work *with* the paper, understanding its properties and limitations, fostering a respectful dialogue with the material world. Accordingly, as argued by, children who engage in the stages of pre-creation, creation, and post-creation can be considered to have

Assessment of Student Creativity

Based on the results of the quantitative analysis of the artistic creativity questionnaire administered to all 20 fourth-grade students at SD 3 Jepang, a total score of 1558 was obtained out of a maximum possible score of 2000. Based on Table 3, the aggregated score yielded a mean value of 77.90, which falls within the high creativity category. These results indicate that the artistic creativity skills of fourth-grade students in producing papier-mâché mask artworks were well developed and

clearly observable. This quantitative evidence supports the assertion by Kaplanidi et al. (2025) that utilizing waste materials, such as in papier-mâché, significantly boosts student creativity by requiring them to transform raw, undefined materials into structured artistic forms.

Table 3. Student Art Creativity Questionnaire Results

Final Score Range	Category	Number of Students	Percentage
81–100	Very High	11	55%
61–80	High	6	30%
41–60	Moderate	3	15%
21–40	Low	0	0%
Total Students		20	100%
Total Score		1558	
Mean Score	High Category	77.90	

Source: Research Data (2025)

Students' creativity on the observing indicator achieved a mean score of 76.65, which falls within the high category. Students who carefully observed instructions and demonstrations exhibited a high level of confidence in executing the mask-making process, indicating that attentive observation supported their engagement and commitment to the creative task. This finding aligns with Zabala et al. (2021), who emphasize that structured observation is a critical precursor to artistic production, allowing students to internalize visual languages before expressing them.

Table 4. Analysis of Students' Artistic Creativity Questionnaire Results by Indicator

No.	Indicator	Mean Score	Category
1	Observing	76.65	High
2	Understanding	77.65	High
3	Experiencing	77.55	High

Source: Research Data (2025)

For the understanding indicator, students reached a very high category with a mean score of 77.65. This result demonstrates that students possessed a strong level of conceptual understanding in engaging in creative art-making activities. Students also displayed effective problem-solving abilities when encountering technical challenges. For example, when experiencing difficulty in forming circular eye shapes, students independently identified solutions by using everyday objects such as bottle caps or spoons as molds. This improvisation correlates with Enactive stage of learning understanding through doing and highlights the capacity of students to engage in immediate, material-based problem solving. Such adaptive behavior also reflects the "divergent thinking" capacity described by Wang et al. (2021), where students do not

merely follow instructions but actively negotiate with material constraints to realize their imaginative concepts.

The experiencing indicator yielded a mean score of 77.55, categorized as high. Students demonstrated the ability to comprehend the meaning and intention behind their artworks through presentations and were able to communicate their ideas clearly in front of the class. Additionally, students actively responded to and appreciated both their own artworks and those of their peers, reflecting emotional engagement and aesthetic sensitivity throughout the artistic process. This validates the perspective of Sun et al., (2021) that creativity is inherently linked to emotional and personal engagement, suggesting that the mask-making activity successfully created an environment where students felt safe to express their inner states.

Assessment of Artistic Experience

Based on the results shown in table 5 of the artistic experience questionnaire, students demonstrated engagement in art-making activities at a very high level. This conclusion is supported by the descriptive statistical analysis, which yielded a mean score of 81.45, indicating that students were able to participate in and experience artistic activities very effectively. The learning process provided students with ample opportunities and creative freedom to explore and produce artworks, thereby fostering meaningful artistic experiences.

Table 5. Students' Artistic Experience Questionnaire in Art-Making Activities

Final Score Range	Category	Number of Students	Percentage
81–100	Very High	11	55%
61–80	High	9	45%
41–60	Moderate	0	0%
21–40	Low	0	0%
Mean Score	Very High Category	81.45	
Total Students		20	100%
Total Score		1628	

Source: Research Data (2025)

At the pre-creation stage, the mean score reached 84.80, indicating that, overall, students possessed prior experiences related to mask art. This finding is supported by the very high mean score for prior artistic experience ($M = 89$), suggesting that most students had been previously exposed to mask-related artworks or cultural practices. Students also demonstrated varied levels of motivation to create artworks, arising both from intrinsic interest and from environmental influences.

Table 6. Indicator-Based Analysis of Students' Artistic Experience Questionnaire Results

No.	Stage of Artistic Process	Indicator	Mean Score	Category
Pre-Creation				
1	Pre-Creation	Prior artistic experience	89	Very High
2	Pre-Creation	Motivation for art-making	79	High
Creation				
3	Creation	Mastery of tools and materials	92	Very High
4	Creation	Understanding of artistic techniques	81	Very High
5	Creation	Communication skills	80	High
6	Creation	Ability to express objects or experiences	79	High
7	Creation	Imaginative ability	67	High
Post-Creation				
8	Post-Creation	Understanding of the production process	79	High
9	Post-Creation	Interpretation and meaning-making of artworks	83	Very High

Source: Research Data (2025)

During the creation stage, the artistic experience questionnaire yielded a mean score of 80, which falls within the high category. The highest indicator score at this stage was mastery of tools and materials ($M = 92$), indicating that students were able to identify, understand, and use the required materials appropriately. This high score contradicts the common assumption that elementary students struggle with complex craft materials, suggesting that when motivated by a culturally relevant task, students can rapidly acquire technical competence (Suwanreang et al., 2025). Students' communication skills related to mask forms were also well developed, as reflected in their ability to express objects through detailed facial features in the mask designs.

At the post-creation stage, the mean score was 81.45, reflecting a high to very high level of artistic experience. Students were generally able to present their artworks in front of their peers with confidence. While some students demonstrated the ability to interpret and articulate the meaning of their mask artworks, others focused primarily on the production aspect without fully understanding the intended meaning of the visual forms.

In addition, students were given opportunities to express appreciation by writing comments and sharing opinions on their peers' mask artworks. The findings indicate that engaging students in papier-mâché art-making activities not only provided them with new artistic experiences but also stimulated the development of artistic and aesthetic experiences, particularly in appreciating and responding to visual artworks. This suggests that experiential and participatory art learning plays a

significant role in fostering students' aesthetic awareness and reflective engagement in elementary visual arts education

DISCUSSIONS

The empirical findings of this study demonstrate that integrating papier-mâché mask-making into elementary visual arts education serves as an effective pedagogical intervention to enhance students' creative capacities and experiential engagement. The discussion expands upon the key theoretical and practical insights derived from the pre-creation, creation, and post-creation stages.

The Pre-Creation Stage: Conceptualization and Pedagogical Grounding

The preliminary phase highlighted the vital role of prior knowledge and sociocultural exposure in shaping students' creative direction. Observation and interview data confirmed that students drew inspiration from direct personal experiences (e.g., local cultural carnivals, toy masks) and indirect visual media (e.g., animated television shows). Translating these abstract ideas into initial visual sketches provided a concrete platform for what Wang & Ho (2021) conceptualize as "planning imagination". Furthermore, grounding art projects in local cultural motifs reinforces the constructivist view that artistic learning is deeply embedded within a child's social and physical environment.

The Creation Stage: Materiality, Problem-Solving, and Reproductive vs. Combinatorial Imagination

During the active hands-on creation process, the transition from two-dimensional planning to three-dimensional construction presented both technical challenges and creative opportunities.

- **Materiality and Eco-Art Pedagogy:** The utilization of recycled paper as the core medium aligns with contemporary trends in Education for Sustainable Development (ESD) and Eco-Art Pedagogy. Beyond developing fine motor control and spatial awareness, working with papier-mâché fostered environmental stewardship among the students by transforming waste into expressive art forms.
- **Imitation and Visual Culture:** A significant proportion of students derived their mask character designs from popular culture, such as superhero figures (e.g., Spider-Man, Ninja Turtles) or animated animals. While traditional art paradigms might critique imitation as a limitation of originality, this behavior aligns with Vygotskian theories of *Reproductive Imagination*. Scaffolding creativity through

familiar cultural symbols (Reproductive) serves as a necessary bridge toward recombining forms into unique visual expressions (Combinatorial Imagination). This underscores the value of Visual Culture Art Education (VCAE) in leveraging popular media to sustain student motivation.

- **Enactive Problem-Solving:** Students encountered material constraints, such as achieving symmetrical eye holes or smoothing coarse paper textures. Rather than becoming disengaged, students exhibited adaptive problem-solving (e.g., using bottle caps and spoons as improvisational molds). This material-based negotiation illustrates high divergent thinking and self-regulation skills, proving that young learners can navigate complex craft media when provided with exploratory autonomy.

Quantitative Corroboration of Creativity and Artistic Experience

The quantitative metrics obtained from the structured instruments strongly support the qualitative observations:

- **High Creativity Levels ($M = 77.90$):** High scores across the indicators of *Observing* (76.65), *Understanding* (77.65), and *Experiencing* (77.55) demonstrate that structured, process-oriented visual art projects successfully move students beyond passive execution toward active conceptual comprehension and expressive confidence.
- **Very High Artistic Experience ($M = 81.45$):** The highest indicator recorded was *Mastery of tools and materials* ($M = 92$), indicating that students quickly acquired technical fluency with three-dimensional media. The post-creation phase, characterized by classroom presentations and peer reflections ($M = 83$ for interpretation and meaning-making), nurtured aesthetic sensitivity, self-reflection, and critical appreciation.

CONCLUSION

This study demonstrates that the implementation of papier-mâché mask-making effectively fosters both artistic creativity and meaningful artistic experiences among fourth-grade students at SD 3 Jepang. The findings reveal that students successfully navigated the pre-creation, creation, and post-creation stages, producing artworks that reflected individual expression, stylistic variety, and conceptual understanding, despite minor technical limitations in visual rhythm and harmony. Quantitative evidence corroborates the qualitative observations, with students achieving a high category in artistic creativity ($M = 77.90$) and a very high category in

artistic experience ($M = 81.45$). These results underscore the efficacy of project-based learning with exploratory media in enhancing technical mastery, imaginative development, and aesthetic engagement within elementary visual arts education.

REFERENCES

- Athanasekou, M. (2024). Nurturing children's mental resilience through art, play, and creativity. In *Building Mental Resilience in Children Positive Psychology Emotional Intelligence and Play*. <https://doi.org/10.4018/979-8-3693-8312-4.ch011>
- Baigutov, K. (2024). Mythology, demonology, and symbolism in Art education: Fostering Creativity and Critical Thinking in Students | Mitologija, deMonologija iR siMbolizMAS Menu eduKAcioje: studentu KuRybišKuMo iR KRitinio MaštyMo ugdyMAS. *Logos Lithuania*, 119, 135–146. <https://doi.org/10.24101/logos.2024.35>
- Baldacchino, L. (2025). ART, CULTURE, AND WELLBEING: Reaping the rewards of creativity. In *Wellbeing and Policy Evidence for Action*. <https://doi.org/10.4324/9781003382447-19>
- Balfany, C. (2024). Metaphors in the Mask: A Process of Exploring Personal and Professional Identities. In *Expressive Use of Masks Across Cultures and Healing Arts*. <https://doi.org/10.4324/9781003365648-14>
- Batič, J., Črnčec, N. R., & Šulin, N. (2025). The Visual Journal as a Way to Strengthen Students' Ability to Self-Reflect | Vizualni dnevnik kot način za krepitev sposobnosti samorefleksije pri dijakih. *Center for Educational Policy Studies Journal*, 15(2), 33–50. <https://doi.org/10.26529/cepsj.1997>
- Cai, X., & Pu, G. (2026). The Effects of Visual Styles and Dimension of VTubers in Live-Streaming Contexts on Users' Emotions, Attitudes, and Cognition. In *Lecture Notes in Electrical Engineering: 1477 LNEE*. https://doi.org/10.1007/978-981-95-1908-8_21
- Chaoul, M. E. (2024). Slate or paper? The slow transformation of the school in Mexico, 1880–1920 | ¿Pizarra o papel? La lenta transformación de las escuelas en México, 1880–1920. *Paedagogica Historica*, 60(1), 59–73. <https://doi.org/10.1080/00309230.2023.2213165>
- González Moreno, A., & Molero Jurado, M. D. M. (2023). Creativity as a Positive Factor in the Adolescence Stage: Relations with Academic Performance, Stress and Self-Esteem. *Behavioral Sciences*, 13(12). <https://doi.org/10.3390/bs13120997>
- Herzog, J., & Duh, M. (2020). The state of art appreciation among nine-and ten-year-old students in slovenian primary schools | Stanje ravni likovne apreciacije med devet-in desetletnimi učenci v slovenskih osnovnih šolah. *Center for Educational Policy Studies Journal*, 10(4), 97–116. <https://doi.org/10.26529/cepsj.935>

-
- Kaplanidi, D., Sismanidou, A., Ziova, K., Riggas, C., & Partarakis, N. (2025). The Role of Craft in Special Education: Insights from the CRAEFT Program. *Heritage*, 8(8). <https://doi.org/10.3390/heritage8080303>
- Lu, Q.-Y., & Huang, C.-H. (2024). Charm Factors of Clay and Composite Materials in Aesthetic Education Curriculum †. *Engineering Proceedings*, 74(1). <https://doi.org/10.3390/engproc2024074070>
- Marquez-Borbon, A. (2024). Views from the South: how making cultures from the Global South can inform sustainability in technologically-mediated arts design practices. *Journal of New Music Research*, 53(1–2), 64–78. <https://doi.org/10.1080/09298215.2024.2442352>
- Oliveira, M., & Gillanders, C. (2024). Cultural and arts education in focus according to the perceptions of future teachers | La educación cultural y artística en foco según las percepciones de futuros docentes. *European Public and Social Innovation Review*, 9. <https://doi.org/10.31637/epsir-2024-333>
- Özden, Ö., & Beriş, Y. (2024). IMPROVEMENT OF TRADITIONAL PAPERS SURFACE AND AS USE FINE ART PAPER. *International Symposium on Graphic Engineering and Design*. <https://doi.org/10.24867/GRID-2024-p80>
- Rodgers, S. (2024). The Pedagogical Power of Paper. *International Journal of Art and Design Education*, 43(4), 583–598. <https://doi.org/10.1111/jade.12543>
- Schiffer, S., & Liu, A. (2024). MoBi-LE - A Low-Cost 3D-printable Robot to Educate Children in Waste Disposal. *ACM IEEE International Conference on Human Robot Interaction*, 955–959. <https://doi.org/10.1145/3610978.3640680>
- Schunk, D. H., & DiBenedetto, M. K. (2022). Self-Efficacy and Engaged Learners. In *Handbook of Research on Student Engagement Second Edition*. https://doi.org/10.1007/978-3-031-07853-8_8
- Sickler-Voigt, D. C. (2026). Teaching and Learning in Art Education: Cultivating Students' Potential from Pre-K through High School, Second Edition. In *Teaching and Learning in Art Education Cultivating Students Potential from Pre K Through High School Second Edition*. <https://doi.org/10.4324/9781003477099>
- Sun, X., Li, J., & Meng, L. (2021). Reflection on EFL/ESL Teachers' Emotional Creativity and Students L2 Engagement. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.758931>
- Suwanreang, C., Thongsuk, J., & Jun-On, N. (2025). Enhancing Cultural Value Propagation in Lanna Artisan Patterning through Educational Intervention in Northern Thailand. *Journal of Ecohumanism*, 4(1), 3933–3945. <https://doi.org/10.62754/joe.v4i1.6252>
- Turan, S. L. (2023). Visual arts as a tool for value education in primary school. In *Global Perspectives on Value Education in Primary School*. <https://doi.org/10.1002/jocb.519>
- Van de Kamp, M.-T., Admiraal, W., Coertjens, L., Goossens, M., & Rijlaarsdam, G. (2022). The Relationship of Types of Exploration Activities with Originality of Visual Arts

Designs. *Journal of Creative Behavior*, 56(1), 108–124.
<https://doi.org/10.1002/jocb.519>

Wang, C.-C., & Ho, H.-C. (2021). Weaving Imagination Into Reality: Imagination-Creativity Process in Design Domain. *Journal of Research in Education Sciences*, 66(4), 245–280. [https://doi.org/10.6209/JORIES.202112_66\(4\).0009](https://doi.org/10.6209/JORIES.202112_66(4).0009)

Zabala, M. P., Camarero-Nuñez, A. S., & Guerra-Guezuraga, R. (2021). Stop looking outward in order to rethink inward: Deceleration through self-portrait | Dejar de mirar hacia fuera para repensarnos hacia dentro: Desacelerar a través del autorretrato. *Artseduca*, (28), 126–140.
<https://doi.org/10.6035/10.6035/ARTSEDUCA.2020.28.10>

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.