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INSTRUCTIONAL APPROACHES IN VISUAL ARTS EDUCATION FOR STRUCTURING CREATIVE ARTWORK: A SYSTEMATIC LITERATURE REVIEW

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Abstract:

This Systematic Literature Review (SLR) explores instructional strategies in visual arts education that promote structured creativity in student artwork, emphasizing methods that assist learners in expressing originality within defined frameworks. Visual arts education is essential for nurturing creative expression. However, educators often struggle to balance providing structured guidance and encouraging individual artistic exploration. To address this issue, a thorough search of scholarly articles was conducted using reputable databases, including Scopus and Web of Science, focusing on studies published between 2022 and 2024. The review process adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, resulting in 23 primary studies being analyzed. Findings were categorized into three main themes: (1) Creativity and Pedagogy in Visual Arts Education, (2) Innovative Approaches, and (3) Technological Integration in Visual Arts. The review indicates that incorporating structured instructional methods boosts students' creative confidence, enabling them to pursue unique artistic expressions within supportive boundaries. The conclusion highlights the need for further research into adaptive instructional models suitable for various learning contexts in visual arts education. This synthesis provides educators with evidence-based strategies to enhance creativity within a structured artistic framework.

Keywords:

Structured Creativity, Visual Art Education, Instructional Strategies, Creative Pedagogy, Technological Integration.

Introduction

Visual arts education has significantly evolved in response to contemporary educational needs and technological advancements (Biscombe et al. 2017; Kröner, Christ, and Penthin 2021; al., 2017; Pant et al. 2023; Yakamovich and Wright 2021). Modern teaching approaches prioritize interactive and student-centered methodologies, which enhance students' understanding and creativity. For example, a study in primary schools in Rijeka, Croatia, determined that interactive teaching methods improved students' grasp of visual arts terminology, their ability to utilize art materials, and their problem-solving creativity (Dehouche, 2023; Tomljenović 2015). Additionally, explicit instruction in meta-cognitive skills has been identified as vital for fostering divergent thinking (Card, Mauch, and Lin 2021; Green 2021; Kušević, Brajčić, and Jurišić 2022; Mahsan et al. 2024). Research shows that teaching these strategies boosts students' fluency and flexibility in creative processes but may not significantly enhance originality (Kamp et al. 2015). Furthermore, the integration of electronic technologies has transformed visual arts education, providing students with access to global resources and new creative tools, thus influencing the visual messages they produce (Lockee and Wang 2014). As educators adopt these modern strategies, it is crucial to address diverse student needs to foster a more inclusive and effective visual arts education environment.

Literature Review

Instructional approaches in visual arts education illustrate a dynamic interplay between creative teaching methods and resource challenges, influencing the development of creative skills in educators and students. Kolyvas, Kostagiolas, and Martzoukou (2024) demonstrate that visual art teachers' creativity significantly benefits from satisfying information needs, with preferences for digital resources. Yet, limitations such as lack of time and limited specialized libraries persist. These findings underscore a need for more tailored resources to foster creative pedagogical practices. Similarly, (Swanzy-Impraim et al. 2023) identify the potential of Innovative Learning Environments (ILEs) in enhancing creativity in secondary education. However, challenges like inflexible layouts and overcrowded classrooms inhibit this development, indicating the necessity of adaptive classroom designs that encourage creative thinking.

Examining broader implications in arts education, Koch (2022) addresses the concept of resilience within visual arts education, emphasizing how rigid subject frameworks may limit students' agency in creative decision-making. This work suggests that reframing visual arts as a flexible, meaningful practice could enhance its relevance, particularly when fostering career skills alongside personal expression. (Pereira et al. 2024) similarly highlight the importance of integrating cultural and social awareness into teacher training, promoting professional skills such as communication and adaptability that are essential in a constantly evolving educational landscape. Both studies advocate for a holistic approach that accommodates the multifaceted nature of creativity in visual arts.

The potential of visual art as a medium for complex theoretical exploration is further illustrated by (Ishii 2023), who examines Gloria Anzaldúa's archived sketches to connect visual art with theory, particularly in relation to social identity and spirituality. Ishii's analysis reveals how Anzaldúa's visual work enriches understanding of her theoretical concepts, offering a unique perspective that complements traditional textual scholarship. This work demonstrates the educational value of integrating theoretical and visual analysis, expanding the scope of how visual arts can communicate complex ideas.

In exploring technology's role in enhancing creativity, Su and Mokmin (2024) argue for sustainable AI integration in visual arts education, where smart tools can support creative processes and reduce environmental impacts. While promising, evidence of long-term effectiveness remains limited, prompting further investigation into sustainable and interactive teaching tools. This aligns with Swanzy-Impraim et al. (2023), who suggests that teacher training programs need to emphasize creativity within the curriculum to cultivate essential 21st-century skills.

A comprehensive review of instructional strategies in visual arts education reveals varied methods to cultivate creativity and critical thinking among students, focusing on embedding arts within broader educational systems. Firdaus Ramli (2023) explores how visual arts are incorporated into STEM subjects through the STEAM framework, offering insights from Malaysian educators on blending arts with science-based curricula. Their results highlight art's value in increasing engagement and comprehension in STEM areas, although challenges remain, such as achieving a balance between arts and STEM components. These insights indicate that integrating visual arts in a multidisciplinary context can enrich teaching methods. However, more precise strategies are needed to address its complexities effectively.

In Ghana, Swanzy-Impraim et al. (2022) examine the perceptions of creativity among secondary visual arts teachers, revealing a reliance on traditional educational resources that limit teachers' creativity frameworks. This limited perspective underscores a need for educational resources that better define and support creative pedagogies. Building on this, Swanzy-Impraim et al. (2023) further assess creative pedagogical practices, finding a disconnection between teachers' understanding of creative development and classroom practices, which often remain teacher-centered. This indicates a gap between intended creative goals and implementation, suggesting that teacher training should prioritize hands-on, creative practices to align pedagogical strategies with curriculum goals effectively.

Further research by Swanzy-Impraim et al. (2023) uses the Four C Model of Creativity to classify Ghanaian secondary visual arts teachers, revealing that only some teachers engage in creative practices at a professional level, categorized as "little-c" or "Pro-c" creativity. The study calls for increased professional development opportunities to support higher levels of creative practice among visual arts educators, reinforcing the importance of embedding creativity into educational standards. Lastly, AlShamsi and AlKetbi (2022) explore the value of action research in UAE early childhood visual arts education, noting its effectiveness in promoting literacy and creativity despite logistical challenges. This highlights the potential of action research as a training tool to empower teachers in early childhood settings, suggesting a pathway for addressing current gaps in resources and space constraints.

A Systematic Literature Review (SLR) on instructional approaches in visual arts education reveals significant insights and trends across different educational contexts, emphasizing the role of emotional engagement, personalized learning, and hybrid teaching methodologies. Jacobs (2023) demonstrates the transformative potential of affective experiences in arts-based service learning. This highlights how integrating emotional learning into creative instruction enables teachers and students to engage critically with social issues while fostering a profound commitment to art education. Such engagement broadens educators' roles and encourages advocacy for arts education in society. However, the study is limited by its qualitative scope

and specific cultural context in Sydney, suggesting a need for broader comparative research to generalize these findings across different populations.

In examining personalized approaches, Yenioğlu and Yılmaz (2022) offer insights into the education of "twice-exceptional" (2e) students—those who are both gifted and face learning disabilities—within visual arts settings. Their study underscores the need for tailored instructional support to foster academic and emotional growth in 2e students. This research highlights the importance of adaptive instructional methods in visual arts. However, it is limited in scope as it relies on a single case study, indicating that further research is necessary to assess the general effectiveness of personalized strategies in diverse educational contexts.

Another notable trend is the implementation of collaborative-constructivist methodologies in visual arts education, especially in hybrid learning environments, as analyzed by (Yeh et al., 2024). Their research in Malaysian primary schools identifies a structured framework incorporating technology-driven collaborative learning, preparing students with the critical thinking and creative skills required in the 21st century. Although this study provides a foundational framework for hybrid visual arts education, its reliance on the Fuzzy Delphi method may limit its applicability due to regional educational norms, thereby suggesting the need for empirical studies that explore the practical application of these methods globally.

Research focusing on the role of creativity in visual arts education emphasizes the challenges teachers face, particularly in resource-limited environments. (Swanzy-Impraim et al., 2023) investigated Ghanaian secondary visual arts teachers' perspectives, revealing obstacles such as administrative constraints and limited resources in fostering creativity. Their findings suggest that while creativity is globally recognized as essential, external factors often impede teachers' efforts. This highlights a gap in resources and policy support that needs addressing in future research.

The application of Artificial Intelligence (AI) in visual arts pedagogy represents a modern shift towards innovative instructional approaches. Wu (2024) introduces AI-based models like CCME-GAN for personalized teaching in traditional painting, demonstrating significant improvements in student creativity. This research shows the potential of AI in transforming traditional art education. However, it remains limited by its technological dependence, warranting further exploration of AI applications in broader educational contexts to ensure accessibility and sustainability.

The SLR on instructional approaches in visual arts education reveals distinct trends and critical insights into strategies that support creative development in students. On the other hand, Halim and Marzidi (2023) emphasize the connection between teacher commitment and creativity in Visual Arts Education, highlighting the need for pedagogies that cultivate creativity and sustained dedication. This study, involving 190 teachers, underscores the positive relationship between creativity practices and teacher engagement, suggesting that teacher investment plays a critical role in enhancing student creativity. Tam (2023) supports this finding by analyzing creative thinking pedagogies in higher education, showing how structure, group interactions, and playfulness in visual arts instruction positively affect creative skills. Both studies point to a shared need for curricular models interweaving creativity-focused practices, especially as instructional designs evolve.

Furthermore, the study on instructional approaches in visual arts education for structuring creative artwork will explore an integrated language-visual arts model aimed at fostering creativity among ethnic minority students in China (Yang et al. 2022; Güneyli et al. 2022). The findings show that incorporating visual arts in language learning facilitates richer creative expression and improved language skills. This interdisciplinary approach expands students' artistic and cognitive skills, indicating a valuable intersection between creativity and multicultural education. However, as (Schellini et al. 2023) report, art students in traditional academic settings often face challenges reconciling academic expectations with creative freedom, suggesting an underlying tension in how institutions value artistic research. These contrasting perspectives reveal a gap in instructional approaches that fully accommodate the unique nature of creative exploration within academia.

In another dimension of visual arts pedagogy, Dehouche and Dehouche (2023) discuss the potential of AI tools like Stable Diffusion to transform visual arts education by allowing for cost-effective, experimental learning. AI-driven text-to-image generation offers new possibilities for engaging students with art history and techniques. Nevertheless, it raises ethical questions surrounding authorship and intellectual property. This technological advancement calls for re-evaluating ownership models within art education, underscoring the need for policies that protect artists' rights while embracing innovation.

In conclusion, the literature highlights a significant trend toward integrating emotional, collaborative, and AI-driven methodologies in visual arts education, reflecting a response to diverse instructional needs. The studies reviewed emphasize the importance of resource-rich and adaptable learning environments that foster creative expression while addressing challenges such as limited resources, pedagogical misalignments, and gaps in teacher training. Future research should empirically validate these approaches in varied cultural contexts, develop practical frameworks that align with curriculum standards, and ensure equitable access to AI tools to enhance inclusivity. Hence, addressing these needs will better equip educators to create supportive environments for creativity and critical thinking, especially within diverse educational systems worldwide, such as Ghana and the UAE.

Research Question

Defining the Research Questions (RQs) is essential in the planning phase and forms the foundation of any SLR, as it guides the entire methodological approach (Kitchenham, 2007). The objective of this SLR is to investigate and synthesize current knowledge on the topic. To structure the RQs effectively, this study applied the PICO framework, a mnemonic tool commonly used to formulate RQs in qualitative research, as proposed by (Lockwood, Munn, and Porritt 2015). PICO comprises three key elements: Population (P), which identifies the group or participants of interest, such as a specific demographic or community; Interest (I), which specifies the central phenomenon or focus, such as an experience, behavior, or intervention; and Context (Co), which defines the environment or setting relevant to the research, such as geographic location or cultural backdrop. These components collectively ensure a comprehensive approach to framing the RQs. The PICO framework aids in structuring RQs in a clear, systematic manner by dividing the study's main elements into three distinct components. This method ensures a focused approach, with well-defined questions that streamline the literature search or study design process.

This study successfully formulated three RQs as follows:

1. How do different pedagogical approaches in visual arts education (Interest) influence creativity development (Outcome) among primary and secondary school students (Population)?
2. How do innovative and digital tools (Interest) enhance or inhibit creative expression (Outcome) among students (Population) in diverse visual arts education settings (Context)?
3. How do culturally responsive and interdisciplinary approaches (Interest) impact the emotional engagement (Context) and creative outcomes of students (Population) in visual arts education?

Material and Method

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method is a widely adopted standard for SLRs, promoting transparency, accuracy, and consistency throughout the review process (Page et al., 202). By adhering to PRISMA guidelines, which provide a structured approach to locating, filtering, and including studies in a review, researchers can enhance the precision and rigor of their analysis. This method also underscores the importance of randomized trials, acknowledging their ability to reduce bias and provide robust evidence for the review. For this study, two major databases, Web of Science and Scopus, were utilized for their extensive coverage and reliability.

The PRISMA approach comprises four primary stages: identification, screening, eligibility, and data abstraction. During identification, databases are searched to gather all relevant studies. Screening follows, where these studies are compared against predetermined criteria to exclude low-quality or irrelevant research. In the eligibility stage, the remaining studies are carefully reviewed to confirm that they meet the inclusion criteria. Finally, data abstraction involves extracting and synthesizing data from the included studies, which is essential for drawing reliable and meaningful conclusions. This structured process ensures the systematic review is conducted rigorously, yielding credible results that guide future research and practice.

Identification

In the initial step of the SLR process, the identification of relevant studies was conducted using Scopus and Web of Science databases. By employing keywords such as "creativity," "teach," and "visual art," the search yielded 184 records from Scopus and 43 from Web of Science. Together, these searches provided a total of 227 records for further review and analysis.

Table 1: The Search String

Scopus	TITLE-ABS-KEY (creativity AND "Visual Art" AND teach*) AND PUBYEAR > 2021 AND PUBYEAR < 2025 AND (LIMIT-TO (SRCTYPE , "j")) AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))
Date of Access: October 2024	
Wos	(creativity AND "visual art" AND teach*) (Topic) and 2022 or 2023 or 2024 (PublicationYears) and Article (Document

Types) and Article (Document Types) and Early Access (Exclude – Document Types) and Open Access

Date of Access: October 2024

Screening

This systematic review selected studies based on strict inclusion and exclusion criteria to ensure relevance and quality. Note that only English-language journal articles published between 2022 and 2024 in their final state were included, totaling 188 initial records. Non-English publications, works published before 2022, conference papers, books, reviews, and articles still in press were excluded. After initial screening, 39 relevant records remained, with 32 from Scopus and 7 from Web of Science. A duplicate check revealed eight overlapping records, which were subsequently removed, resulting in a refined set of 31 unique studies for further analysis.

Eligibility

In the third step, the eligibility phase, a group of 31 articles was collected for in-depth review. This stage involved carefully evaluating each article’s title and content to ensure they met the study’s inclusion criteria and aligned with the research goals. During this process, 8 articles were excluded as they did not meet the necessary criteria. The reasons for exclusion included being outside the study’s scope, having irrelevant titles, abstracts that did not align with the research objectives, or lacking full-text access. This refinement led to a final selection of 22 articles for further analysis.

Data Abstraction and Analysis

This study used integrative analysis to examine and synthesize various quantitative research designs to identify key topics and subtopics. The initial step involved gathering data, as shown in Table 2, where 22 articles were reviewed for content relevant to the study’s themes. Key studies on instructional approaches in visual arts education for creative artwork structuring were evaluated, focusing on methodologies and findings. Correspondingly, the authors collaborated to develop themes based on the evidence, maintaining a log of observations and reflections. Any inconsistencies in theme development were resolved through discussions with the co-author to ensure clarity and consistency in interpretation.

Table 2: Numbers and Details of Primary Studies Database

No .	Authors and Years	Title	Journal	Scopus	Wos
1	(Kolyvas, Kostagiolas, and Martzoukou 2024b)	The Impact Of Information Needs Satisfaction On The Creativity Of Visual Art Teachers	Journal of Documentation	/	
2	(E Swanzy-Impraim et al. 2023a)	An investigation into the role of innovative learning environments in fostering creativity for secondary visual arts programs in Ghana	Journal of Creativity	/	

3	(Koch 2022)	Perceived (ir)relevance: resilience and Visual Arts	Social Dynamics	/
4	(Ishii 2023)	“Creative Acts of Vision”: Connecting Art and Theory through Gloria Anzaldúa's Archived Sketches	Journal of Aesthetic Education	/
5	(Pereira et al. 2024)	Dialogues in space-time: At the crossroads between Arts Education and Cultural Citizenship	European Public and Social Innovation Review	/
6	(Su and Mokmin 2024)	Unveiling the Canvas: Sustainable Integration of AI in Visual Art Education	Sustainability (Switzerland)	/
7	(Swanzy-Impraim et al. 2023)	Creativity and initial teacher education: Reflections of secondary visual arts teachers in Ghana	Social Sciences and Humanities Open	/
8	(Ramli et al. 2022)	STEAM-ing: Preliminary Insights in Consolidating Arts with STEM	Asian Journal of University Education	/
9	(Swanzy-Impraim et al. 2022b)	Promoting creativity: Secondary visual art teachers' perceptions and understanding of creativity in Ghana	Thinking Skills and Creativity	/
10	(AlShamsi et al. 2022)	Training Teachers Using Action Research for Innovation in Early Childhood Education Literacy	International Journal of Learning, Teaching, and Educational Research	/
11	(E Swanzy-Impraim et al. 2023b)	Exploring creative pedagogical practices in secondary visual arts programs in Ghana	Curriculum Journal	/
12	(E Swanzy-Impraim et al. 2023c)	Gauging Ghanaian Secondary Visual Arts Teachers' Levels Of Creativity: Four C Trajectory Of Creativity	Thinking Skills and Creativity	/
13	(Jacobs 2023b)	Affective And Emotional Experiences In Arts-Based Service-Learning Environments	International Journal of Emotional Education	/
14	(Yenioğlu et al. 2022)	A Single-Subject Case Study Of Twice Exceptionality	Gifted Education International	/
15	(Yeh et al. 2024)	Defining The Collaborative-Constructivism Based Learning And Teaching Approach In Malaysian Primary Schools In Supporting The Hybrid Learning	Journal of Advanced Research in Applied Sciences and Engineering Technology	/

		Of Visual Arts Education: A Fuzzy Delphi Method Study		
16	(E Swanzy-Impraim et al. 2023d)	How Ghanaian Secondary Visual Arts Teachers Perceive The Role Of Creativity In Their Teaching	International Journal of Education Through Art	/
17	(Wu 2024)	Application Of Artificial Intelligence-Based Visual Arts Pedagogy In Traditional Painting Education	Applied Mathematics and Nonlinear Sciences	/
18	(Halim and Marzidi 2023)	The Relationship Between Psychology, Creativity Practices, And Teacher Commitment In Visual Arts Education	Journal for ReAttach Therapy and Developmental Diversities	/
19	(Tam 2023)	Integrating Creative Thinking Skills Pedagogies Into A Higher Education Visual Arts Course	International Journal of Art and Design Education	/
20	(Schellini et al. 2023)	Academic Philistinism? The Challenges Of Contemporary Artistic Research Inside Academia. Semi-Structured Interviews With Visual Art Students In Brazil	Arte Individuo Y Sociedad	/
21	(Güneyli et al. 2022)	A Study On The Effects Of Language And Visual Art Integrated Teaching On Language Learning Performance And Satisfaction Of Ethnic Minority Students In China	Frontiers In Psychology	/
22	(Dehouche and Dehouche 2023)	What's In A Text-To-Image Prompt? The Potential Of Stable Diffusion In Visual Arts Education	Heliyon	/

Quality of Appraisal

In line with Kitchenham and Cahrter's (2007) guidelines, we assessed the quality of primary studies—original research articles selected for detailed analysis—using a framework from (Anas Abouzahra et al. (2020)consisting of six quality criteria (QA1–QA6). Each criterion received one of three scores: "Yes" (1) if fully met, "Partly" (0.5) if somewhat met, or "No" (0) if not met at all. The criteria focused on evaluating key aspects: whether the study's purpose was clearly stated (QA1); if its relevance and usefulness were evident (QA2); the clarity of its methodology (QA3); the definition of core concepts (QA4); any comparisons with similar research (QA5); and acknowledgment of limitations (QA6). This structured scoring system enabled a systematic and consistent evaluation of each study, allowing for thorough quantitative and qualitative comparisons and enhancing the overall reliability and rigor of the review's findings.

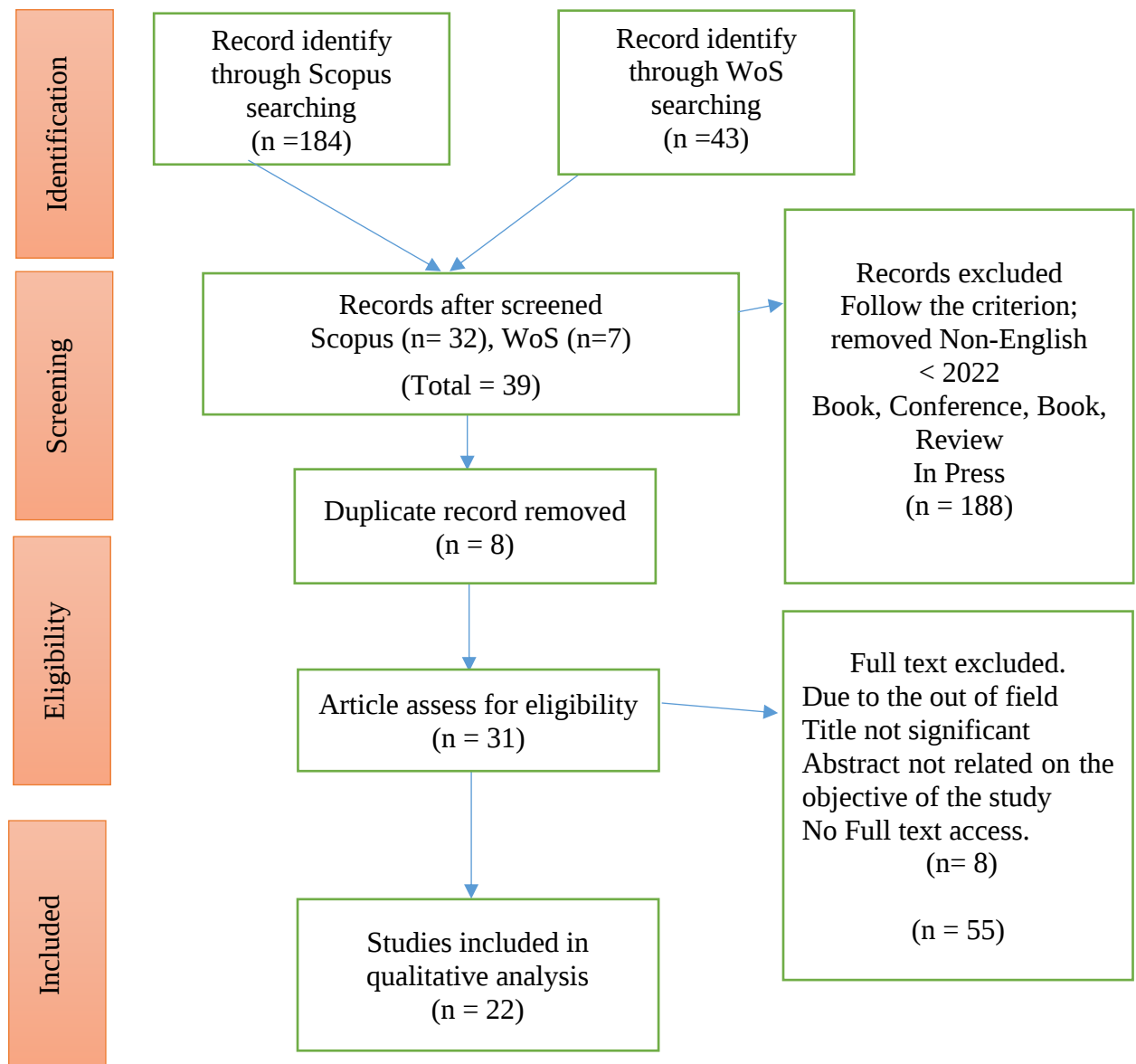


Figure 1: Flow Diagram Of The Proposed Searching Study (Page et al. 2021)

Result dan Finding

The background of the selected studies is presented. Table 3 displays the quality assessment results for the chosen primary studies. The table presents the quality assessment scores for 22 primary studies (PS1–PS22) across six quality criteria (QA1–QA6), with scores ranging from 0 to 1 per criterion. Each study received a total score and a percentage, reflecting overall quality. Studies PS5, PS7, PS13, PS15, PS19, and PS21 scored highly, achieving 5.5 points (91.67%), indicating strong adherence to quality standards. PS16 received a perfect score of 6 (100%), fully complying with all criteria. Most studies, such as PS1, PS2, PS6, PS8, and PS11, scored 5 points (83.33%), demonstrating consistent quality. Lower scores, around 4 to 4.5 points (66.67% to 75%), were observed in studies like PS3, PS4, and PS22, indicating gaps in

meeting specific criteria. Overall, the table highlights a range of quality levels, with most studies meeting a high standard of rigor, contributing valuable insights to the review.

Table 3: Quality Assessment Table For The Selected Papers

Data	Q1	Q2	Q3	Q4	Q5	Q6	Total Marks	Percent
PS 1	1	1	1	1	0.5	0.5	5	83.33
PS 2	1	1	1	1	0.5	0.5	5	83.33
PS 3	1	1	1	0.5	0.5	0	4	66.67
PS 4	1	1	0.5	0.5	0	1	4	66.67
PS 5	1	1	1	1	0.5	1	5.5	91.67
PS 6	1	1	1	1	0.5	0.5	5	83.33
PS 7	1	1	1	1	0.5	1	5.5	91.67
PS 8	1	1	1	1	0.5	0.5	5	83.33
PS 9	1	1	1	0.5	0.5	0.5	4.5	75.00
PS 10	1	1	0.5	0.5	0	1	4	66.67
PS 11	1	1	1	1	0.5	0.5	5	83.33
PS 12	1	1	1	1	0.5	0.5	5	83.33
PS 13	1	1	0.5	1	1	1	5.5	91.67
PS 14	1	1	0.5	1	1	0.5	5	83.33
PS 15	1	1	1	1	0.5	1	5	91.57
PS 16	1	1	1	1	1	1	1	100.00
PS 17	1	1	1	1	0.5	0.5	5	83.33
PS 18	1	1	1	1	1	0	5	83.33
PS 19	1	1	1	1	1	0.5	5.5	91.67
PS 20	1	1	1	0.5	0.5	0.5	4.5	75.00
PS 21	1	1	1	1	0.5	1	5.5	91.67
PS 22	1	1	1	0.5	0.5	0	4	66.67

The themes that were initially developed were refined to ensure consistency. Two experts, one specializing in visual art and the other in curriculum design, conducted the analysis selection to validate the issues presented. During the expert review phase, each subtheme was evaluated for clarity, relevance, and suitability to confirm its domain validity. The authors also compared their findings to address inconsistencies in the theme development process. If any discrepancies in the themes emerged, the authors collaborated to resolve them. In the final stage, the themes were further adjusted for consistency. Correspondingly, assessments were conducted by experts to validate the issues. This review phase ensured that each subtheme was clear, significant, and appropriate for the domain. Consequently, any necessary modifications were made based on the authors' judgment and expert feedback.

Creativity and Pedagogy in Visual Arts Education

Research on fostering creativity in visual arts education, particularly in Ghana, emphasizes the role of flexible learning spaces and pedagogical practices in enhancing student creativity. Alternatively, Swanzy-Impraim et al. (2023) highlight that ILEs with adaptable, collaborative designs are crucial in under-resourced or crowded classrooms, suggesting that reform towards flexible classroom layouts can better support creative development. These findings align with Kolyvas, Kostagiolas, and Martzoukou's (2024) observation that access to diverse information resources also aids creative instruction by providing educators with varied tools. Studies further reveal that teachers' creativity is shaped by their educational background, with many Ghanaian teachers noting a gap between policy goals for creativity and their capacity to foster it effectively due to limited training. Swanzy-Impraim et al.(2023) advocate for more robust

Initial Teacher Education (ITE) and professional development in creative and critical thinking skills. Additionally, Halim and Marzidi (2023) emphasize that access to resources and strong teacher commitment are essential to implementing creative pedagogies, positively impacting both motivation and student learning outcomes.

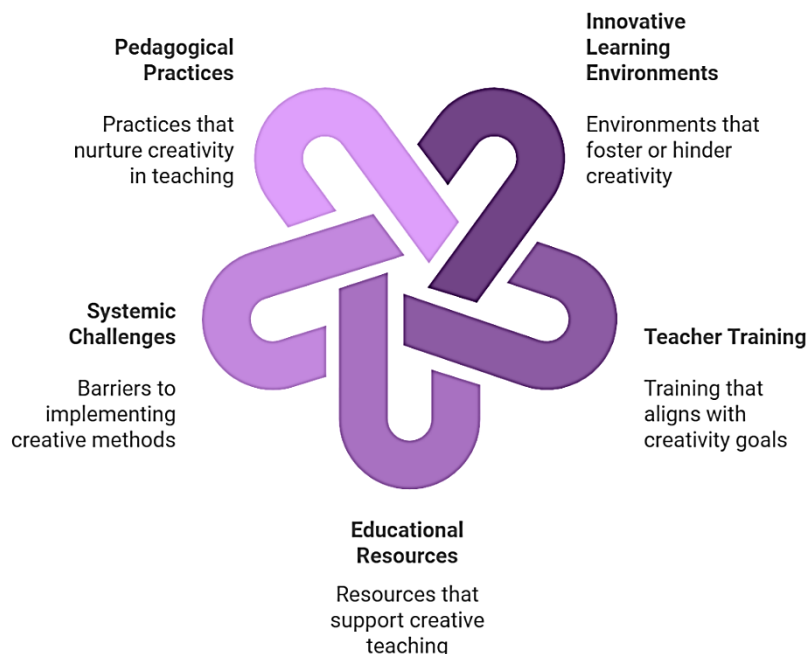


Figure 1: Enhancing Creativity in Visual Art Education

Innovative and Technological Approaches in Visual Arts

Integrating technology into visual arts education has shown significant promise for enhancing creativity, sustainability, and accessibility. Furthermore, Su and Mokmin (2024) emphasize that AI optimizes resources by reducing dependence on physical materials, promoting a more sustainable educational model. Their study, based on 36 out of 685 reviewed articles, underscores AI-driven tools' role in creating eco-friendly and accessible art education environments. These technologies offer a basis for developing interactive programs that meet diverse pedagogical needs. Similarly, Ramli et al. (2022) discovered that incorporating visual arts into STEM education (STEAM) enhances creativity, critical thinking, and technological skills. AI has demonstrated potential in personalizing traditional art instruction. Wu (2024) created an AI-based model to teach Xinjiang traditional painting, enhancing student creativity through tools such as CCME-GAN and BERT-LDA. CCME-GAN, or Creative Classifier and Model-Enhanced Generative Adversarial Network, generates personalized paintings, while BERT-LDA (Bidirectional Encoder Representations from Transformers and Latent Dirichlet Allocation) provides intelligent analysis of artwork based on thematic and aesthetic criteria. Dehouche and Kullathida (2023) highlight that AI tools like Stable Diffusion can facilitate interactive art history learning but caution about intellectual property issues related to AI-generated art. Additionally, AlShamsi et al. (2022) emphasize that action research promotes creative integration in early childhood education. Together, these studies illustrate how technology and action research can drive sustainable, adaptable, and inclusive visual arts education, addressing diverse learning needs and fostering ongoing innovation.

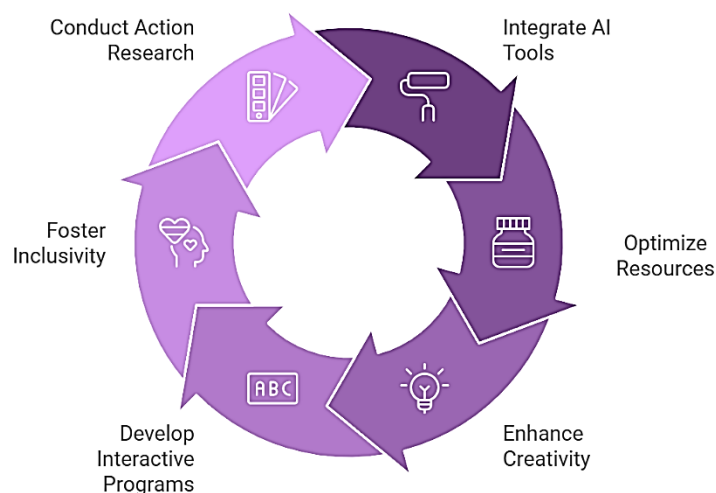


Figure 2: Cycle of Technological Integration in Visual Arts Education

Cultural, Emotional, and Interdisciplinary Connections

Studies emphasize visual arts education's cultural, emotional, and interdisciplinary significance, showing how it fosters resilience, engagement, and critical self-reflection. Koch (2022) examines resilience in art education, revealing that students' rigid views of "art" often limit personal expression. By reframing art as a resilience-building process, Koch suggests art education can become a path to personal growth and meaningful connections. On the other hand, Jacobs (2023) highlights arts-based learning's emotional impact on pre-service teachers in service-learning contexts, noting how participatory experiences in drama, music, and visual arts deepen understanding of social justice and enhance emotional and intellectual engagement. This approach fosters advocacy and a commitment to incorporating emotional depth and critical thinking into teaching. Interdisciplinary approaches, as shown by Pereira et al. (2024) and Zhang and Jia (2022), blend artistic and academic disciplines, enhancing critical thinking, language skills, and cultural awareness, particularly for ethnic minority students. Finally, Yeh et al. (2024) underscore collaborative, constructivist models for hybrid learning in Malaysia, which foster creativity, engagement, and adaptability in digital environments. Together, these studies reveal how visual arts education can support personal, cultural, and intellectual development through innovative and interdisciplinary practices.

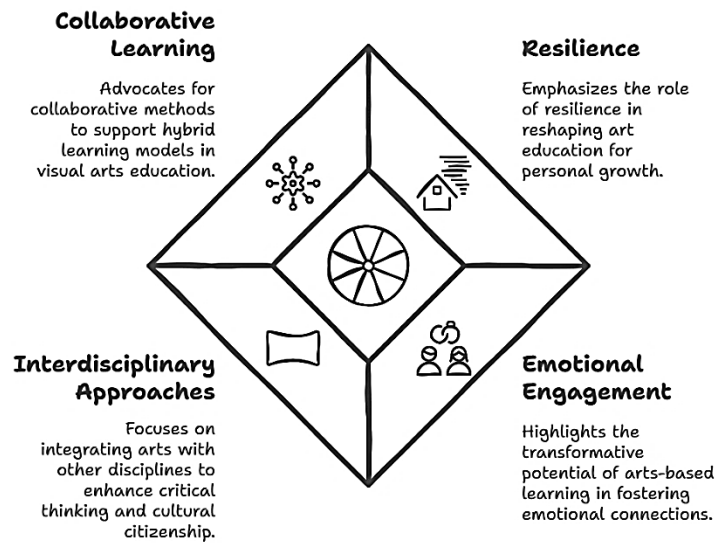


Figure 3: Visual Arts Education

Discussion and Conclusion

Research on enhancing creativity in visual arts education, especially in Ghana, stresses the importance of adaptable learning spaces and targeted pedagogical practices. Consequently, studies indicate that ILEs and flexible classroom designs are crucial in resource-limited settings, supporting a reform toward classrooms that foster creative expression. Access to diverse educational resources is essential, as it equips teachers with the necessary tools for creative instruction. However, teachers face challenges aligning with policy expectations due to limited training in creativity-focused approaches. This underscores the need for enhanced teacher education and ongoing professional development centered on creative and critical thinking.

Technological integration, particularly AI, is also emerging as a transformative approach in art education, promoting sustainability by reducing dependency on physical materials. AI-driven tools foster interactive and accessible learning models, offering personalized instruction and supporting traditional art forms. Furthermore, incorporating interdisciplinary strategies in visual arts, such as blending arts with STEAM, cultivates creativity, resilience, and critical self-reflection. Through these approaches, visual arts education nurtures personal growth, cultural awareness, and intellectual engagement, contributing to an inclusive educational environment that supports diverse learning needs.

Conclusion

Research on enhancing creativity in Ghana's visual arts education emphasizes adaptable learning spaces and effective teaching practices. Note that innovative environments in resource-limited settings enable creative engagement, while diverse resources equip educators to support creativity-centered instruction. Limited training in creativity-focused methods presents challenges, highlighting a need for improved teacher preparation. Technological integration, particularly AI, promotes sustainability and interactive learning, enhancing traditional art education. Moreover, interdisciplinary approaches, such as combining arts with STEAM, further foster creativity, resilience, and reflective thinking, building an inclusive

educational environment that supports students' cultural awareness and intellectual development.

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