

CONTEMPORARY USE OF ART MATERIALS AND THEIR INFLUENCE ON PRIMARY SCHOOL STUDENTS' ARTISTIC DEVELOPMENT

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Abstract: Art education and upbringing, in their broader meaning, aim, through program-defined contents and a developed educational system, to build a value system, especially among children and the young population, which ultimately contributes to the general social development. In a narrower sense, art education and upbringing encourage children's creativity, their pursuit of the beautiful and sublime, and their interest in fine art. These are two interconnected processes: on the one hand, mastering the art language through art theory, which provides the foundation for recognizing works of art and distinguishing them from kitsch; and on the other hand, developing one's own artistic expression, when art becomes a pursuit and a practice. Although often underestimated, art theory in children's artwork serves as a tool for expressing emotions, cultural identity, and abstract ideas. This highlights the role of art education not only in aesthetic formation but also in fostering communication and symbolic literacy. In this sense, the ability to use artistic language becomes part of a broader educational mission that connects individual growth with cultural continuity. The study therefore investigates how children develop and apply the language of art theory, how students and teachers interpret this symbolic dimension, and how well teachers are prepared to support it. In order to examine these issues in practice, the research was conducted in five primary schools in North Macedonia. It included analysis of national curricula, comparative case studies, classroom observations, and teacher training workshops. Over 500 student artworks were qualitatively and visually analyzed, complemented by teacher reflections, to provide a comprehensive understanding of pedagogical approaches to symbolism. The triangulation of these methods made it possible to explore both the artistic products of children and the teaching strategies that frame their creation. The findings revealed that children naturally incorporate art elements from the art theory in their artwork to convey personal, emotional, and cultural meanings. However, many teachers lacked the training to interpret or support such expression effectively, which indicates a strong need for teacher development focused on art theory literacy and culturally responsive teaching in the visual arts. These insights demonstrate that children's creativity can flourish most when teachers are equipped to recognize and encourage symbolic thinking. The research underscores the importance of fostering symbolic thinking through open-ended, emotionally supportive, and culturally aware pedagogical practices. Strengthening art theory expression in classrooms not only enhances artistic outcomes but also enriches overall educational practice. On this basis, the study advocates for integrating art theory as a central component of primary art education and teacher training programs. In doing so, it points to a long-term perspective in which art education contributes to personal development, cultural understanding, and the quality of the educational system as a whole.

Keywords: Pedagogical transformation, art-based education, teacher professional development, creative classroom practice and emotional and cultural development

1. INTRODUCTION

Art education and upbringing, in their broader meaning, aim, through program-defined contents and a developed educational system, to build a value system, especially among children and the young population, which in turn influences the value system of society as a whole and contributes to broader social development. They not only enhance artistic skills but also play a formative role in shaping cultural awareness, emotional intelligence, and social values (Edwards, Caldwell & Heaton, 2021; Stojanović Stojić & Stajić, 2022). Art education and upbringing can be understood as two interrelated processes: on the one hand, mastering the artistic language through art theory, which enables knowledge of works of art and recognition of the value difference between art and kitsch; and on the other hand, developing one's own artistic expression, when art becomes both a pursuit and a practice. Within this dual process, the role of art materials is especially significant. Materials are not passive tools, but active mediators of children's artistic and emotional experiences. Contemporary studies confirm that the availability and selection of art materials strongly shape students' motivation, creativity, and capacity for symbolic expression (Blagojeva, 2019; Spee et al., 2023). In primary education, carefully chosen resources can stimulate curiosity, refine motor skills, and

encourage children to externalize emotions and cultural identities through visual form (Potočnik & Devetak, 2019; Caiman & Jakobson, 2019). Traditional media such as paper, pencils, tempera, and clay remain central in school practice, yet the integration of new and alternative materials has become increasingly relevant in contemporary classrooms. Digital technologies, recycled elements, and mixed media open new possibilities for exploration and align school practice with contemporary art trends (Marshall, 2019; Edwards, Caldwell, & Heaton, 2021). Such approaches not only broaden the technical repertoire of students but also promote problem-solving skills, experimentation, and risk-taking as essential aspects of creative learning (Hetland et al., 2019; Hallam, 2018). The success of these processes, however, depends strongly on the teacher. Teachers mediate the relationship between students and materials and guide the process of artistic upbringing. Research shows that pedagogical strategies can determine whether art education becomes a space of mechanical reproduction or a dynamic environment for authentic creativity (Hallam, 2018; Zhang, Yang, & Li, 2025). Teacher training that integrates art theory literacy and culturally responsive approaches has been identified as essential for fostering inclusive and stimulating art classrooms (Stojanović Stošić & Stajić, 2022; Zhang, Yang, & Li, 2025).

This paper therefore examines art education and upbringing with a specific focus on the contemporary use of art materials and their influence on the artistic development of primary school students. By analyzing curricular orientations, classroom practices, and case studies, it seeks to demonstrate how the interplay of materials, pedagogy, and values contributes to the formation of students' artistic identity, symbolic literacy, and personal growth.

2. METHODS

This research uses a mixed-method approach that combines qualitative and quantitative strategies in order to create a multidimensional analysis of contemporary art education in primary schools across North Macedonia. The methodological structure is carefully designed to reflect the complexity of educational environments, as well as the need to evaluate both observable outcomes and the subjective experiences of teachers, students, and parents.

The study was conducted during the 2023/2024 academic year and included five primary schools: three public institutions in rural areas—Oktisi, Podgorci, and Vevchani; one urban public school in Ohrid; and one elite private school, Nova International School, in Skopje. These schools were selected to reflect socioeconomic diversity, variation in infrastructure, and different administrative models (public versus private). This variety enabled a comprehensive comparative analysis of how access to resources, teacher preparation, and curricular freedom affect artistic outcomes in young learners. Data collection is based on several key tools and phases. First, a content analysis of curriculum documents and annual teaching plans was carried out in order to examine how official objectives for visual art education are translated into practical lesson planning. The analysis focused on thematic coverage, material requirements, and assessment strategies, comparing them across the five institutions. Semi-structured interviews were conducted with 40 art teachers, both before and after a pedagogical intervention. Teachers were asked about their teaching philosophies, the constraints they faced, perceptions of student creativity, and familiarity with contemporary art materials. The post-intervention interviews focused on changes in instructional strategies and observed shifts in student engagement. Surveys were administered to 150 students and 120 parents to capture their experiences, perceptions, and expectations regarding visual art education. Questions addressed enjoyment of art classes, availability of materials, perceived creativity in assignments, and parental support or skepticism toward non-traditional art activities. These surveys provided a broader social context for interpreting the classroom data. A distinctive element of the methodology is the visual analysis of student artworks. More than 500 pieces were collected and evaluated using a structured rubric developed for the study. This rubric measured works across four dimensions: thematic understanding, formal composition, use of symbolism, and creative risk-taking. The evaluation took place in two phases—before and after the teachers participated in a workshop series designed to introduce alternative teaching strategies and non-traditional materials. Field observations were also conducted. Over 30 lessons were observed across the five schools, focusing on classroom setup, material usage, teacher–student interaction, and student behavior during creative activities. These observations helped contextualize survey and interview responses and provided real-time insight into pedagogical practices. The intervention consisted of professional development workshops for the participating teachers. These sessions introduced contemporary art-making techniques, alternative materials such as recyclable goods and textiles, and process-oriented instruction. Teachers were encouraged to design and implement a new lesson plan based on what they had learned. The impact of the intervention was measured through comparative analysis of pre- and post-workshop student work, teacher feedback, and observed changes in classroom dynamics. This methodological framework enables the identification of patterns, correlations, and contrasts across various data sources. The triangulation of curriculum analysis, interviews, surveys, visual interpretation, and classroom observation creates a robust and reliable foundation for the conclusions drawn. More importantly, the design itself models an interdisciplinary, learner-centered approach to research—reflecting the same values that are advocated for in the teaching of art.

3. RESULTS

The results of this research reveal substantial differences in how visual arts education is conceptualized and implemented across primary schools in North Macedonia. Curriculum analysis demonstrated a significant gap between the progressive objectives stated in the national curriculum—developing visual literacy, fostering creativity, and supporting personal and cultural expression—and the actual practices found in most classrooms. Public schools often relied on repetitive, teacher-centered projects such as drawing seasonal motifs or copying standardized forms. These activities, while easy to manage, did little to encourage exploration, symbolic depth, or thematic progression. In contrast, the private school in the sample implemented integrated, thematic units inspired by international standards, which engaged students in more complex, interdisciplinary, and inquiry-based tasks.

Material conditions emerged as another decisive factor. Public schools, particularly in rural areas, struggled with systemic shortages: insufficient supplies, lack of dedicated classrooms, and inadequate infrastructure. Teachers frequently depended on parental donations or improvised with low-cost substitutes, which limited students' opportunities to experiment with diverse media. Conversely, the private school provided a well-equipped studio environment with access to high-quality and non-traditional materials, including digital technologies. While this abundance supported more ambitious projects, it sometimes led to an overemphasis on polished outcomes, with teachers steering students toward visually refined but less original results.

The results of this research highlight the limited integration of contemporary art materials in primary school art education and the implications this has for students' artistic development. Survey data and classroom observations consistently indicated that traditional techniques—particularly the use of pencil, felt-tip pens, and watercolors—dominate classroom practice. When responses of “very often” and “often” were combined, the percentage exceeded 70% across all schools. These materials, while foundational, restricted the opportunities for experimentation and did not allow students to explore the expressive potential of alternative media. In contrast, techniques associated with contemporary practices, such as working with clay, cardboard, recycled materials, photographic devices, or digital tools, were reported at very low levels, in some cases almost negligible. This imbalance confirmed earlier suspicions that modern tendencies in the use of art materials remain largely absent from everyday teaching.

Students' own voices supported these findings. While a high percentage across schools stated that art education influenced their artistic development—ranging from 63.64% in ES “Nova” to 100% in ES Oktisi—the connection between this influence and material use was uneven. When asked about professional aspirations, a significant number of students from “Nova” and ES Ohrid expressed reluctance to pursue art beyond a hobby, with 34.78% and 26.32% respectively declaring no interest in a professional artistic career. This gap suggests that although students recognize the importance of art education, the restricted material base and lack of exposure to contemporary techniques limit their motivation to engage with art as a serious field of development.

Parents' responses revealed similar contradictions. Over 70% of parents in ES Oktisi, Podgorci, and Vevcani confirmed that art education positively affected their children's artistic growth, compared to only 55.56% in ES Ohrid. However, when asked about factors influencing artistic development, the majority prioritized talent above all else, followed by teacher and family support, with social conditions ranked lowest. This perspective implies that material choice and pedagogical practice were underestimated in parental assessments, as parents frequently equated success with innate ability rather than with process, experimentation, or resource availability. Furthermore, when asked about preferred professional trajectories for their children, most parents emphasized technical, business, or legal fields, with art ranking last. These views reinforced the marginal position of contemporary artistic practice in the wider educational and cultural context.

Teacher practice and professional development played a crucial role in shaping student outcomes. Interviews revealed that many teachers in public schools adhered to rigid, product-oriented instruction and had limited opportunities for ongoing professional growth. By contrast, teachers in the private school engaged regularly in training and collaborative planning, although pressures of public exhibitions occasionally constrained student freedom. The intervention workshops proved transformative across all contexts: over 80% of teachers reported increased confidence with alternative materials, and classroom observations showed higher student engagement, particularly among previously disengaged learners. These findings suggest that teacher professional development directly influences classroom practices and student engagement. Many teachers admitted that they adhered strictly to the prescribed curriculum and avoided experimenting with alternative materials due to fear of sanctions, lack of training, or limited resources. This resulted in what was often described as “precision drawing,” where students were required to produce clean, easily recognizable images. Such practices left little room for creative risk-taking and stifled the free use of brush, pencil, or other expressive tools. Teachers' lack of knowledge about modern tendencies in the use of art materials further restricted the implementation of the Art Education Program, leading to what was described as a gap between the normative goals of the curriculum and the actual classroom reality.

Students' work prior to the interventions often relied on clichés and imitative strategies, reflecting the constraints of traditional classroom practices and limited material use. Following the workshops, student pieces demonstrated greater thematic clarity, symbolic expression, and originality, with learners experimenting with unconventional media such as recycled objects, textiles, and natural materials to convey personal narratives, emotions, and cultural identities. Surveys and interviews confirmed that students valued lessons allowing freedom of choice and personal expression, while parents' perspectives remained more mixed, balancing appreciation for creativity with a preference for aesthetically polished outcomes.

The consequences of the previously limited conditions were visible in the quality of student artworks. Observations confirmed that many works were formally neat but aesthetically limited, often lacking compositional balance, symbolic content, or thematic richness. Teachers frequently misused professional terminology, confusing drawing with painting or neglecting to explain fundamental artistic elements such as texture, line, or color interaction. Such shortcomings produced works that appeared polished but lacked deeper artistic value. Students were rarely encouraged to combine materials or experiment with media outside the prescribed framework, which narrowed their creative possibilities and reduced the subject to routine repetition.

Nevertheless, workshop activities and pilot interventions pointed to promising alternatives. When teachers and students were introduced to the use of recycled materials, natural objects, and mixed techniques, a marked increase in engagement and originality was observed. For example, students demonstrated curiosity and excitement when allowed to combine tempera, dry pastels, or chalk in non-traditional ways, producing new visual effects and richer compositions. Teachers reported that such approaches helped them recognize the importance of process over product and that students, including those who had previously been less active, displayed higher levels of motivation.

Taken together, these findings indicate that while students, parents, and teachers all show awareness of the importance of art education, the actual practice is constrained by overreliance on traditional media, insufficient teacher training, lack of resources, and social attitudes that undervalue artistic experimentation. At the same time, the interventions confirm that the introduction of contemporary art materials can revitalize classroom dynamics, stimulate creativity, and foster stronger connections between students' artistic expression and their cultural identities. Although the processes remain uneven, the overall trajectory suggests a gradual movement toward more open and contemporary approaches in the use of art materials in primary education.

4. DISCUSSIONS

This study focused specifically on the contemporary use of art materials and their influence on primary school students' artistic development. By examining how students engage with traditional versus alternative media, the research highlights the critical role that material choices, pedagogical strategies, and teacher empowerment play in shaping creative outcomes.

The results of this study reveal the complex interplay of curriculum design, material resources, teacher practice, and cultural context in shaping students' artistic development. The gap between curriculum ideals and classroom realities in public schools reflects systemic limitations in educational policy implementation, teacher preparation, and resource allocation. These findings are consistent with international research showing that without sustained support, ambitious curricular frameworks risk becoming symbolic rather than practical.

Material conditions were shown to significantly influence both the form and depth of student expression. Inadequate resources restricted experimentation, while abundant resources sometimes encouraged conformity to aesthetic norms. This duality illustrates that creativity depends less on material wealth itself than on how materials are framed pedagogically. Process-oriented, exploratory approaches can transform even modest resources into opportunities for innovation, while overly controlled environments may suppress originality despite material abundance.

Teacher practice emerged as the most decisive factor. The workshops demonstrated that when teachers are empowered to experiment with alternative materials and open-ended assignments, students quickly expand their symbolic repertoire and risk-taking capacity. This underscores the importance of continuous professional development that challenges product-focused ideals and fosters reflective, student-centered approaches. Teacher beliefs about art, more than any single structural condition, were shown to shape classroom dynamics and student engagement.

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The evaluation of student artworks confirmed that artistic development cannot be measured solely by technical proficiency. Symbolism, originality, and thematic clarity proved sensitive indicators of the impact of pedagogical change. The shift from cliché-driven outputs to personal and abstract representations demonstrates that children are capable of deep conceptual thinking when provided with supportive conditions. Artworks thus serve as both creative products and diagnostic tools for assessing educational quality.

Cultural context also proved central. The absence of local artistic traditions from most classrooms represents a missed opportunity for identity formation and intercultural understanding. When students were encouraged to integrate folk motifs, personal narratives, and community heritage into their work, their engagement and pride were visibly enhanced. These findings suggest that a hybrid approach—combining global perspectives with local heritage—would enrich students’ cultural literacy and strengthen their sense of belonging.

Overall, the study demonstrates that meaningful reform in visual arts education requires systemic support across multiple dimensions: adequate material resources, curriculum structures that balance freedom and guidance, and most importantly, empowered teachers who can mediate between tradition and innovation. By integrating process-oriented pedagogy, culturally relevant content, and diverse materials—including contemporary and alternative media—primary schools can create environments where students not only acquire artistic skills but also develop symbolic literacy, personal expression, and cultural awareness.

5. CONCLUSIONS

This study particularly highlights how the contemporary use of diverse art materials—ranging from recycled objects and textiles to digital tools—directly fosters students’ creativity, symbolic thinking, and personal expression. The deliberate incorporation of contemporary and alternative art materials serves as a pivotal mechanism for enhancing students’ symbolic literacy and fostering the development of their creative identity. The intentional integration of these materials into classroom practice proved essential for stimulating artistic development and motivating students to engage meaningfully with the art curriculum.

This research makes a compelling case for reimagining the role of visual art in primary education and reestablishing its centrality in the holistic development of children. The findings demonstrate that art is not a peripheral subject but an essential component of cognitive, emotional, and cultural growth. By engaging with diverse materials, developing symbolic expression, and exploring both personal and collective identity, students cultivate competencies that extend beyond the classroom and into broader social life.

The study reveals that, while the national curriculum articulates progressive aims such as fostering creativity, encouraging cultural awareness, and supporting visual literacy, these ideals are often undermined in practice. Public schools, particularly in rural areas, continue to face shortages of basic resources, inadequate infrastructure, and reliance on repetitive, product-oriented assignments. At the same time, private schools, despite their material abundance, sometimes impose aesthetic constraints that limit genuine originality. These findings point to systemic challenges that cut across contexts and emphasize that material wealth alone is insufficient for nurturing creativity.

The results also highlight the decisive role of teachers in shaping students’ artistic experiences. Where educators lacked training and relied on prescriptive models, student work tended to reproduce clichés and showed limited symbolic depth. Conversely, when teachers were provided with professional development opportunities, introduced to alternative materials, and encouraged to embrace open-ended, process-oriented learning, the transformation was immediate and significant. Students began to experiment, take creative risks, and use symbolism to convey personal and cultural narratives. This shift underscores the importance of teacher empowerment as the cornerstone of effective art education reform.

Equally important is the integration of cultural context into the art classroom. The absence of local traditions, motifs, and heritage from many school curricula represents a lost opportunity to affirm identity and foster intercultural understanding. Yet, when students were invited to explore their cultural backgrounds artistically, their engagement deepened, and their work became richer in both meaning and form. This suggests that culturally responsive pedagogy should be a guiding principle in future reforms, bridging global perspectives with local traditions.

Overall, the research underscores that meaningful reform in visual arts education requires coordinated action at multiple levels. Curriculum frameworks must balance skill development with expressive freedom; schools must provide equitable access to materials and creative spaces; and teacher training must prioritize reflective, student-centered practices. Most importantly, a philosophical shift is required—away from viewing art as a decorative or secondary subject and toward recognizing it as a vital means of fostering creativity, empathy, and identity in young learners.

In synthesizing theory and practice, this study demonstrates that classrooms can become transformative spaces where students not only acquire technical skills but also learn to interpret their worlds, articulate their emotions, and develop resilience through creative exploration. Creativity, as the findings show, is not a luxury but a necessity.

Ensuring that every child has the opportunity to explore, express, and evolve through art is not merely an educational objective but a social responsibility.

REFERENCES

- Blagoeva, N. V. (2019). Project-based integration of contemporary art forms into teaching visual arts to primary school students in the after-school art clubs. *International Journal of Education & the Arts*, 20(18), 1–20. <https://doi.org/10.18113/P8ijea2019v20n18>
- Caiman, C., & Jakobson, B. (2019). The role of art practice in elementary school science. *Science & Education*, 28(6–7), 613–634. <https://doi.org/10.1007/s11191-019-00036-2>
- Edwards, J., Caldwell, H., & Heaton, R. (2021). *Art in the primary school: Creating art in the real and digital world*. Routledge. <https://doi.org/10.4324/9780367273361>
- Hallam, J. (2018). *Creativity in primary education* (3rd ed.). Learning Matters. <https://doi.org/10.4135/9781529717012>
- Hetland, L., Winner, E., Veenema, S., & Sheridan, K. (2019). *Studio thinking 2: The real benefits of visual arts education* (2nd ed.). Teachers College Press.
- Huang, L., Leung, S. K. Y., Li, J. W., & Wu, Z. (2024). How does comprehensive art education facilitate children's creativity? A mixed-methods study in China. *Early Education and Development*. <https://doi.org/10.1080/10409289.2024.2404822>
- Lazeski, B. (2002). *Fine art - elements and principles, for first year*. Skopje: Prosvetno Delo.
- Lukaka, D. (2023). Art education and its impact on creativity and critical thinking skills: A review literature. *International Journal of Arts and Humanities*, 1(1), 31–39. <https://doi.org/10.61424/ijah.v1i1.15>
- Marshall, J. (2019). *Transdisciplinarity and art integration: Toward a new understanding of art-based learning across the curriculum*. Routledge.
- Ordev, D. (2004). *Methodology of art education teaching*. Skopje: Pedagogical Faculty “St. Clement of Ohrid.”
- Ordev, D. (2006). *Basics of art teaching*. Skopje: University “Ss. Cyril and Methodius.”
- Ordev, D. (2006). *Materials and techniques in art teaching*. Skopje: University “Ss. Cyril and Methodius,” Pedagogical Faculty “St. Clement of Ohrid.”
- Penfold, L. (2023). *Art|Play: Integrating modern and contemporary art practices into early childhood curriculum. Project Zero, Harvard University*. <https://pz.harvard.edu/projects/artplay>
- Potočnik, R., & Devetak, I. (2019). The differences between pre-service fine art and primary school teachers' knowledge about materials of fine art paintings. *Research in Arts and Education*, 2019(2), 161–176. <https://doi.org/10.54916/rae.118960>
- Prusiewicz, C. (2023). Art and craft material use patterns by pre-school and elementary school children. *Journal of Exposure Science & Environmental Epidemiology*. <https://doi.org/10.1038/s41370-023-00523-3>
- Scott-Barrett, J. (2023). Nurturing curiosity and creativity in primary school classrooms. *Teaching and Teacher Education*, 135, 104865. <https://doi.org/10.1016/j.tate.2023.104865>
- Spee, B. T. M., et al. (2023). Machine learning revealed symbolism, emotionality, and imaginativeness as primary predictors of creativity evaluations of Western art paintings. *Frontiers in Psychology*, 14, 1224932. <https://doi.org/10.3389/fpsyg.2023.1224932>
- Stojanović Stojić, M., & Stajić, J. (2022). Creative games with different materials in arts education. *International Journal of Cognitive Research in Science, Engineering and Education (IJCRSEE)*, 10(1), 15–24. <https://doi.org/10.23947/2334-8496-2022-10-1-15-24>
- Zhang, H., Yang, Y., & Li, J. (2025). Effective strategies for teachers to guide children's art activities: Based on a survey of children's art activities and teacher guidance, and an analysis of their correlation. *Frontiers in Psychology*, 16, 1600401. <https://doi.org/10.3389/fpsyg.2025.1600401>
- Zhang, Y. (2025). Impact of arts activities on psychological well-being. *Acta Psychologica*, 254(4), 104865. <https://doi.org/10.1016/j.actpsy.2025.104865>