

Quantifying creativity to expand it? Better art begins with better understanding

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Color materials enhance Children's creativity. Credit: JAIST

Do different painting materials affect the creation of children's paintings? How might we increase children's focus and motivation to

learn, while also improving their creativity? Researchers focusing on these very questions at the Japan Advanced Institute of Science and Technology (JAIST) have recently published the results of a wide-spanning study involving more than 650 children, revealing insight into improving fine art education for children.

Through various genres, styles, and even periods of art, [media](#) used to create paintings varies greatly. Delicate materials, such as crepe paper or fine brushes, tend to be the materials of choice when artists wish to produce a painting with fine details. Rough materials, on the other hand, tend to result in rougher, more abstract lines. Complex and subtle interplay of the combinations of these materials allows for more varied and nuanced expressions, as well.

Researchers Lan Yu and Yukari Nagai confirm that [children](#) tend to use relatively few materials when painting, most of which are best-suited to representing fine detail, such as watercolor pens and colored pencils. These finely detailed implements may be the ones chosen for the primary school classroom due to reasons of convenience, cost, and cleanup. Nevertheless, these types of materials are most commonly used in realistic, detailed styles of art—and indeed, children who use these materials do tend to work in such styles of artwork.

Children don't mix media often, and the results of this study indicate that children feel that it is difficult to do so. When they do mix media, it tends to result in uneven line thicknesses and color, leading to a final product worse than they had hoped.



Breakthrough effects of Mixed Media to enhance children's creativity. Credit: JAIST

However, despite the complacency that children and indeed teachers may feel with their comfortable and convenient painting materials, limiting the media used for creating artwork seems to result in disinterest, and robs children of the opportunity for growth. This study raises concerns that using the same tools that painting students have always used, or avoiding combining tools with which they are familiar, may not produce the best results. Luckily, the young learners in this study displayed [positive attitudes](#) toward trying [new materials](#), indicating that teaching techniques involving new materials would likely be accepted. In fact, introducing new materials into children's fine art

education may produce clear beneficial results.

The researchers make clear recommendations to educators involved in fine art for children. According to the study, introduction of new materials would expand children's repertoires, and could allow them not only to improve the visual effects of their paintings, but even to expand their creative consciousness. The process of mixing different [painting](#) materials expands children's creativity, and can also improve their motivation, resulting in increased ability to maintain attention on learning, a skill crucial both inside and outside the primary school classroom. Finally, children should be instructed not only in the application and use of new media, but also how to manage object proportion using adaptive training exercises with multiple materials.

More information: Lan Yu et al, Painting Practical Support: A Study about the Usage of Painting Materials in Children's Painting Works, *Social Sciences* (2020). [DOI: 10.3390/socsci9040033](https://doi.org/10.3390/socsci9040033)

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