Title of the Proposal:
Artful Mathematics: Enhancing Mathematical Understanding through Creative Knowledge Brokering

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Presentation Format:
Remote

Objective and Connection to MACAS Conference Topics:
This presentation explores the concept of creative knowledge brokering (Rycroft-Smith, 2022), which integrates art-based methods—such as infographics, songs, poetry, and visual arts—into mathematics education. By leveraging arts-based methods, this work seeks to bridge the gap between complex mathematical concepts and learners' comprehension, ultimately deepening engagement and understanding. The proposal aligns with MACAS conference themes by demonstrating ways in which interdisciplinary methods enhance mathematical learning and communication.

Abstract: In the field of mathematics education, the fusion of art-based methods and scientific inquiry offers a powerful avenue for deepening understanding and engagement. This presentation delves into the concept of creative *knowledge brokering* (Rycroft-Smith, 2022*)*, which employs art-based methods—such as infographics, songs, poetry, and visual arts—to bridge the gap between complex mathematical concepts and learners' comprehension. By integrating arts and sciences – and exploding the myth that they are separate domains - we can illuminate mathematical concepts, making abstract ideas more tangible and relatable. Participants will gain insights into practical and enjoyable ways to incorporate creative approaches into teaching and learning mathematics, based on evidence from research. This proposal aligns beautifully with the theme of *circles of resonance*, claiming that mathematics and the arts are not separate, but overlapping Venn diagrams, where the vesica – the intersection – is a place of great creativity, enjoyment, and understanding.

Connection with Symposium 2025 Theme: Circles of Resonance in Mathematics, Sciences, and Arts: This proposal strongly aligns with the "Circles of Resonance" theme by challenging the artificial divide between mathematics and the arts. It argues that these domains overlap in a rich and creative space—akin to a Venn diagram where the vesica represents a place of profound creativity, enjoyment, and insight.

Type of Communication:
Practical examples of interdisciplinary, creative teaching and learning of mathematics, supported by research evidence.