

Pedagogical use of creative movement in the teaching of Mathematics in Primary School

A BOOK CHAPTER PRESENTATION by Konstantinos Manolakis
Mavromataki Private School

Moerman, P. (2024), *Letting Dance Teach, Dance, Education, Esthetics, Ethics, Theory and Method* - Chapter 6: Dancing Math anticipated English translation from the Swedish of the book Moerman, P. (2022). Dans som undervisning. Dans, pedagogik, estetik, etik: Teori och metod. Lund: Studentlitteratur, 2nd ed.

Moerman, P. (2016), “Dancing Math: Teaching and Learning in the Intersection of Aesthetic and Mathematical Literacy” in Bridges Finland: *Mathematics, Music, Art, Architecture, Education, Culture: Conference Proceedings*: Bridges Finland 2016: University of Jyväskylä / [ed] Torrence, E., Torrence, B., Séquin, C., McKenna, D., Fenyvesi, K., Sarhangi, R., Phoenix: Tessellations , 2016, p. 269-276

General Information about the resource

This particular chapter from the book presents the theoretical background and practical steps for implementing a series of lesson plans that combine the teaching of mathematical concepts through dance (creative movement). The proposal of the academic teacher, dancer and mathematician, Paul Moerman, harmoniously balances between the aesthetic and artistic value of the integration of dance and creative movement in the school classroom with its utilitarian potential, i.e. to use dance as a methodological tool for understanding mathematical concepts . The article summarizes the above and adds the results of the author's relevant research during the implementation of the program. The program is aimed at primary school students and can be implemented directly by a teacher (with the corresponding variations depending on the class). It can also be used as a teacher training program, as we were lucky enough to experience at the M2-CM (Math through Music and Creative Movement) conference in Edsbyn, Sweden by the author himself in January 2024.

Keywords: Math, Dance, Creative Movement, Interaction, Learning space, Aesthetics of learning, Multimodal learning, Primary education, Adult education

Further notes about the resource and its use: Chapter contents include:

- Theoretical reflection on the interaction of aesthetic and mathematical literacy
- Preparation of the learning space
- Ethnomathematical introduction - historical and linguistic aspects



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- Math concepts such as: double and half, even and odd numbers, multiplication tables, concepts such as equal, more, the most, few, less, the least, pairs of 10 with additions and subtractions, equal, longer, shorter, twice as long, additions and subtractions with borrowing- regrouping, geometry, circle, ellipsis, rectangle, square, cube, triangle, polygon, fractions, clock, proof why $0 \cdot \infty = 1$
- Some of these approaches are also mentioned in the article.

References:

<https://www.diva-portal.org/smash/get/diva2:1037432/FULLTEXT01.pdf>

https://www.academia.edu/40887374/Dancing_Math_Teaching_and_Learning_in_the_Intersection_of_Aesthetic_and_Mathematical_Literacy

