

ScholarOne - Dance Learning in Elementary Education: Interactive Media and Mirror Neurons

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Abstract

This study aimed to identify the learning pathways of elementary school students by using interactive multimedia materials (prepared using Kinect v2) to learn dance. This study investigated the influence of multimedia, signaling, and self-explanation principles and learning outcomes in 101 Taiwanese elementary school students who completed self-designed questionnaires. The collected data were used to construct a structural equation model for analysis. The findings revealed that among the various learning pathways observed when using interactive multimedia materials, only one specific pathway led to significant learning outcomes for students. In this pathway, students 1) understand how to use the instructional materials; 2) identify cues within the materials; 3) transform those cues into inner ideas; and 4) translate these inner ideas to generate concrete and creative dance movements on their own. The study also explained the mechanism behind the learning pathway identified in this research based on mirror neurons' function at the mimesis and reflexive learning stages of student learning, providing important insights for dance educators.

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