

Enhancing Projective Geometry Learning through Ethnomathematics: A Cross-Cultural Digital Approach

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Abstract

This research examines the role of ethnomathematics in facilitating the teaching of projective geometry within digital learning environments. By incorporating indigenous architectural concepts, such as the “simple house theory,” the study explores how cultural contexts can provide intuitive entry points for understanding complex geometric structures. Conducted in a virtual classroom setting with students from Universitas Negeri Makassar, Indonesia, and Tunghai University, Taiwan, the study employs surveys, project-based evaluations, and statistical analysis to assess the effectiveness of culturally embedded instructional methods. Findings indicate that integrating cultural narratives into mathematical education enhances engagement, promotes deeper comprehension, and fosters interdisciplinary learning. The study highlights the broader potential of ethnomathematical approaches in reshaping modern pedagogy, particularly in online and cross-cultural educational settings.

Keywords: Ethnomathematics, Projective Geometry, Simple House Theory, Cross-Cultural Education, Online Learning