

ABSTRAK

This study examines the relationship between the traditional game of Orok Bambu typical of Yogyakarta and the concept of physics, especially centripetal force and sound waves, using ethnographic-based qualitative descriptive methods through observation, interviews, and experiments. The results show that the centripetal force in this game depends on the rotation radius and the mass of the drum, where the larger the radius, the smaller the angular acceleration, as well as that the resulting sound waves are affected by the rotation speed and drum mass, with varying intensity. The analysis shows that the integration of these games in physics learning not only helps to understand the concept of physics contextually, but also plays a role in the preservation of local culture by making traditional games an educational medium. This study proves that the local wisdom-based approach in science education is able to increase the interest in learning and awareness of the younger generation towards cultural heritage, along with the relevance of physics concepts that can be applied in daily life.