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PRODUCTION DEVELOPMENT OF TRADITIONAL MALAY BOAT FOR TOURISM

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ABSTRACT

The traditional Malay Bedar boat is an important element of Malaysia's maritime heritage, but its survival is threatened by a lack of skilled craftsmen, insufficient technical documentation, and the expensive cost of traditional materials. The study focuses on creating a precise production plan with Rhinoceros 3D software and building a scaled model with 3D printing to determine its suitability as a preservation strategy. The Bedar boat was digitally modelled with Rhinoceros 3D software, and a prototype was built to test its accuracy, durability, and material efficiency.

The findings show that 3D printing can make a perfect recreation of classic boat designs while decreasing material waste and expenses. However, there are some issues, such as material strength limitations and printer resolution constraints, that remain. This research helps to preserve Malay maritime heritage by creating a digital and physical framework for new generations. While 3D printing cannot replace traditional craftsmanship, it is an effective tool for preservation and teaching. Future recommendations include using more durable 3D printing materials, involving traditional craftsmen in digital model refinement, and creating interactive digital platforms to raise public understanding of Malay boat-making practices. This project provides a frame for long-term cultural preservation and innovation in maritime preservation by combining new technology and traditional knowledge.

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