

## ABSTRACT

*The increasing amount of plastic waste has become a global environmental challenge that demands innovative solutions. One potential alternative is recycling plastic waste into furniture that integrates sustainability, functionality, aesthetics, affordability, minimal risk, and ease of product access. This study aims to understand consumer preferences for furniture made from recycled plastic using the Theory of Planned Behavior (TPB) approach. The research employs a design research method consisting of interviews and questionnaires to analyze factors such as attitudes, subjective norms, and perceived behavioral control, along with environmental concern, risk perception, cost perception, and accessibility perception influencing consumer purchase intentions, supplemented by a literature review. The findings indicate that consumers with higher education, moderate environmental concern, and attention to quality and aesthetics demonstrate a strong preference for environmentally friendly furniture. This study serves as the foundation for design recommendations for modular shelves made from recycled plastic, enhanced with a persona-based approach. Consumer preferences for recycled plastic furniture are influenced by the product's practicality, space efficiency, aesthetic appeal, affordability, and good quality. Additionally, environmental sustainability adds value and enhances the product's appeal in the eyes of consumers. However, the primary purchasing decisions are driven by product accessibility, durability, and price. To maximize the market success of this product, efforts should focus on consumer education campaigns, improving product accessibility through wider distribution, and offering added value that highlights the positive environmental impact.*

**Keywords:** *Furniture, recycled plastic, Theory of Planned Behavior, persona, design recommendations*