

ABSTRACT

The high volume of waste and the low level of awareness among MSMEs regarding environmentally sustainable practices pose significant challenges to the implementation of Circular Supply Chain (CSC) in the culinary sector. This study aims to design an educational game model based on CSC using the Design Thinking approach to increase environmental awareness among MSME actors. A case study was conducted at Alam Kapau Pangkalpinang, employing the five stages of Design Thinking: empathize, define, ideate, prototype, and test. The game, developed using *Microsoft Excel*, adapts the Beer Game concept and features interactive components such as role selection, waste management simulation, and sustainability scoring. Results from pre- and post-tests showed an average improvement of 50 points in user understanding, alongside high satisfaction in terms of usability, perceived benefits, and engagement. Therefore, the game proved effective as a practical educational tool to promote sustainable behavior change among MSMEs.

Keyword: *Circular Supply Chain, Game-Based Learning, Design Thinking, MSMEs, Environmental Sustainability.*