

# Exploring Café-Goers' Perceptions and Acceptability of Innovative Sustainable Non-Lid Cup Designs

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## Abstract

This study explores cafe-goers' perceptions and acceptability of innovative, sustainable non-lid cup designs in Metro Manila, addressing environmental challenges posed by single-use plastics. Using a qualitative phenomenological approach anchored in the Theoretical Framework of Acceptability (TFA), the research examines how 40 regular cafe-goers interpret lidless packaging via video stimulus and semi structured interviews. Findings reveal a complex discourse between environmental commitment and skepticism regarding material reliability. Participants exhibited a “performance deficit” mindset, harboring a negative bias towards sustainable materials due to previous experiences with flimsy paper-based innovations. Results are categorized into four major themes: Functional Trust, Situational Feasibility, Aesthetic Value, and Market Integration. While the design’s “aesthetic vibe” and novelty serve as a primary emotional catalyst for interest, significant barriers such as “spillage anxiety” and hygiene concerns persist, particularly for on-the-go consumption in high density urban environments. The study concludes that for lidless designs to be accepted, they must achieve material parity with sturdiness of plastic. Successful adoption requires institutional normalization, making sustainable designs the default standard and the use of high-performance materials to bridge the gap between environmental altruism and practical usability.

**Keywords:** *Acceptability, Metro Manila, Perception, Sustainable Non-Lid Cup Design, Theoretical Framework of Acceptability (TFA),*

## Introduction

The rise of café culture and the popularity of takeaway beverages have increased the use of single-use paper cups and plastic lids, contributing significantly to environmental pollution. According to the United Nations Environment Programme (2021), billions of disposable beverage cups are discarded annually, many of which contain polyethylene linings that hinder recyclability and lead to high landfill volumes. These disposable lids and liners contribute to waste mismanagement and microplastic contamination, emphasizing the urgent need for sustainable alternatives. Recent studies highlight that material substitution alone is insufficient to solve the waste issue; rather, innovations in cup design and user behaviour must work together to minimize environmental impact (Moretti et al., 2021). This study focuses on an innovative, sustainable non-lid cup design—a structural packaging solution that eliminates the need for plastic lids through an integrated folding mechanism. This research uses a video demonstration as a visual stimulus to examine how consumers perceive the functional and aesthetic attributes of this concept. Studies such as those by Atta-Delgado et al. (2024) reveal how consumers' perceptions and acceptability of products with this type of sustainable packaging provide the final guarantee of the overall market's viability. By investigating user reactions to the design, the study aims to assess the feasibility of transitioning from plastic-dependent models to eco-friendly alternatives.

Despite technological innovations in sustainable packaging, limited research has examined how consumers perceive and accept unconventional packaging such as non-lid cups. Existing studies tend to focus on reusable cup systems or compostable materials rather than design-integrated waste solutions (Allison et al., 2021). Moreover, consumer acceptance depends heavily on perceived convenience, hygiene, and spill prevention factors that may vary across demographic and cultural contexts. In café-dense areas, such as Metro Manila, café-goers are often students with fast-paced lifestyles, making practicality and mobility central to their consumption choices. Without understanding the specific functional barriers that prevent café-goers from trusting these innovations, the transition to a lidless system remains a challenge for local business owners and manufacturers. There remains a research gap regarding how these consumers evaluate non-lid cup designs, particularly in balancing sustainability with convenience

and aesthetics. Understanding this gap is essential for guiding sustainable packaging transitions in urban café environments.

The objective of this study is to explore the perceptions and acceptability of an innovative, sustainable non-lid cup design among café-goers in Metro Manila. Likewise, it seeks to uncover the subjective meanings and qualitative experiences of consumers associated with lidless packaging for cups, specifically focusing on how consumers interpret the design's visual and anticipated sensory cues, as demonstrated through a video stimulus. By investigating these perceptions, the study aims to understand the cognitive and emotional processes that lead consumers to either embrace or reject sustainable innovations presented in a high-paced urban café culture like that of Metro Manila.

## Materials and Methods

This study employed a qualitative phenomenological design to explore café-goers' lived experiences and attitudes toward eco-innovative packaging. Prioritizing depth over numerical representation, the design focused on how individuals interpret convenience and environmental value. Using purposive sampling, 40 regular café-goers in Metro Manila (aged 18+, with takeaway beverage experience) were selected to ensure data saturation. Data was analyzed through Reflexive Thematic Analysis (RTA), guided by the seven pillars of the Theoretical Framework of Acceptability (TFA). Responses were categorized into constructs such as Burden and Self-efficacy, while remaining open to emerging themes. Trustworthiness was ensured through Lincoln and Guba's (1988) criteria—credibility, transferability, dependability, and confirmability—via member checking, detailed documentation, and transparent analytic reporting

The study examined café-goers in Metro Manila, a hub of diverse students, employees, and residents with strong café culture. Participants were chosen for their regular takeaway beverage habits and exposure to sustainable packaging, making them suitable for assessing perceptions of non-lid cup designs. Purposive sampling selected 40 regular café-goers (aged 18+) to ensure relevant insights and data saturation. This sample size was appropriate for qualitative research, emphasizing depth over numerical representation. Study sites included a mix of local and franchised coffee shops offering takeaway beverages with disposable or eco-friendly packaging. Preference was given to establishments engaged in or exploring sustainable practices. Accessibility, customer volume, and management consent guided site selection, ensuring varied perspectives across café environments.

## Results and Discussion

The analysis revealed four interconnected themes shaping café-goers' perceptions of sustainable non-lid cup designs. Functional Trust emphasized integrity and safety, with participants valuing reliable, non-toxic materials and hygienic, hassle-free use. Situational Feasibility reflected daily routines, balancing dine-in versus take-out preferences while managing risks such as spillage and space efficiency. Aesthetic Value highlighted visual appeal, novelty, and social influence, where brand reputation and global awareness shaped adoption. Finally, Market Integration underscored practicality and normalization, linking business logistics and price sensitivity with broader drivers like environmental awareness, advocacy, and sustainable preferences. Together, these themes illustrate how functionality, context, aesthetics, and market forces converge to influence acceptability of eco-innovative packaging



Figure 1: Coding process of the Reflexive Thematic Analysis

Functional Trust represents consumers' confidence in the lidless cup's ability to perform reliably and safely. It reflects both technical integrity—material strength, durability, and insulation—and psychological assurance, including hygiene and ease of use. Café-

goers in Metro Manila emphasized that functional reliability must precede environmental appeal; trust is earned through consistent performance rather than sustainability claims. Concerns about spillage, condensation, and contamination highlight the need for sturdy, non-toxic materials and hassle-free handling. This theme aligns with the *Perceived Effectiveness* and *Burden* pillars of the Theoretical Framework of Acceptability, showing that eco-innovation succeeds only when functionality meets everyday practicality.



**Feasibility** reflects how well the lidless cup fits into consumers’ daily routines and environments. Café-goers found it suitable for dine-in settings but less practical for on-the-go use, where spillage anxiety and handling challenges reduced confidence. Feasibility depends on balancing convenience with sustainability, aligning with the *Ethicality* and *Opportunity Cost* pillars of the Theoretical Framework of Acceptability. **Aesthetic Value** captures the emotional and social appeal of the design. Participants described the cup as stylish and “Instagrammable,” linking visual novelty to identity and café culture. Aesthetic appreciation often outweighed functional concerns, showing that design appeal can drive engagement even amid practical doubts. **Market Integration** emphasizes the transition from novelty to normalization. Participants valued eco-friendly packaging but resisted disruptions to routine. True integration requires reliable performance, affordability, and systemic adoption—where sustainable options become the default rather than the exception.

## Conclusion

This study makes several contributions to existing literature on sustainable packaging and consumer behavior, specifically in extending the application of the Theoretical Framework of Acceptability (TFA) in an emerging market. First, this research refines the Affective Attitude TFA pillar by the identification of the “Performance Deficit” mindset and while traditional theories suggest that environmental concern drives positive attitude towards green and more sustainable products, this study demonstrates that past failures of sustainable materials (e.g., paper straws) create a “defensive skepticism” that can override environment altruism. This suggests that when it comes to innovative packaging, the emotional response is governed by historical functional trust rather than by the user’s moral conviction on sustainability.

Second, the study also contributes to the understanding of Burden and Self-Efficacy (TFA) within the framework of urban mobility. By identifying “Spillage Anxiety” as a direct reflection of the unique urban structure of Metro Manila—erratic which also has a high pedestrian density—this research proves that “acceptability” is not a static trait of the consumer but a direct response to their physical environment. Third, this research highlights the role of Hedonic Motivation—the emotional drive to forgo in behaviors that maximize pleasure and minimize pain—ans social currency as well in sustainable adoption. By linking “visual appeal” and “Novelty Experience” to consumer willingness, the study also confirms that aesthetic “Form” can

act as a psychological bridge that compensates for perceived functional risks. This adds a layer to existing theories by suggesting that digital heavy cultures such as the Philippines, the social reward for using a “trendy” design can temporarily mitigate any skepticism of the functionality of an item.

Finally, the study also provides a theoretical basis for forced normalization. The data shifts the discourse from a choice to a standard practice instead, which also suggests that market integration is most successful when the sustainable option becomes the default instead of a consumer choice. This challenges traditional models of consumer autonomy, by suggesting that in price-sensitive markets, institutionalization is more effective as a driver for behavioral change than

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