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Comparing Mobile App User Experience in Indonesian Coffee Retail: A Paired UEQ Study of Kopi Kenangan and Fore Coffee

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Abstract
This study compares the user experience of the Kopi Kenangan and Fore Coffee mobile applications using the User Experience Questionnaire (UEQ). A quantitative paired-evaluation design was applied to 100 purposively selected respondents in Greater Jakarta and Bandung who had used and transacted through both applications. Each participant assessed both applications across six UEQ dimensions. Descriptive scores, UEQ benchmark categories and paired-sample t-tests were examined, with open-ended user feedback used to contextualize the findings. Both applications received positive scores on all dimensions. Fore Coffee obtained higher sample mean scores throughout; however, statistically significant paired differences were observed only for dependability ($p = .004$), stimulation ($p = .003$), and novelty ($p = .025$). The differences in attractiveness ($p = .114$), perspicuity ($p = .642$), and efficiency ($p = .089$) were not statistically significant. The findings indicate specific advantages for Fore Coffee in perceived system reliability and experiential qualities, without establishing its superiority on every aspect of the user experience. Suggestions for application improvements focus on service dependability, engaging features, and continued usability evaluation.

Keywords: coffee-ordering applications, fore coffee, kopi kenangan, paired comparison, user experience questionnaire

Introduction

Mobile applications have become a central part of how coffee retailers connect customers with ordering, payment, promotions, and customer-service functions. In Indonesia, coffee consumption and the expansion of modern retail formats provide an important context for digital ordering services. A discussion of the shift from conventional coffee-shop visits toward app-supported purchasing is provided by Widayanti (2022). Yet a convenient transaction channel is not necessarily an enjoyable or dependable one. User experience (UX) includes the practical ease of completing tasks as well as users' perceptions of confidence, stimulation, and originality when interacting with a digital product (Laugwitz et al., 2008; Schrepp, 2023).

Kopi Kenangan and Fore Coffee offer branded mobile services within Indonesia's competitive coffee market. Ordering applications can simplify purchases, but payment interruptions, unclear navigation, delayed delivery information, and limited responsiveness may undermine an otherwise positive experience. Mobile-retail research identifies usability and perceived service value as relevant considerations for consumer acceptance (Wohllebe et al., 2020). Evaluating an app therefore calls for attention to the experience of using it, not merely its presence in application stores or its promotional reach.

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Previous work has used UX evaluation methods in mobile services, including studies of Fore Coffee usability (Nada & Indriyanti, 2022), the Fore Coffee application (Djau, 2024), and comparisons of other consumer applications (Khuntari, 2022; Ningsih & Tania, 2023). Research has also compared mobile coffee-ordering applications using the UEQ (Pangemanan et al., 2025). These studies provide valuable context, but the present investigation asks a more specific within-person question: how do the same consumers evaluate Kopi Kenangan and Fore Coffee when both applications are assessed with identical UEQ dimensions? The paired design reduces differences caused solely by using separate respondent groups, although it does not eliminate differences in prior app exposure or transaction experiences.

The UEQ covers six dimensions: attractiveness (overall appeal), perspicuity (ease of becoming familiar with the app), efficiency (task completion without unnecessary effort), dependability (control and predictability), stimulation (motivation and interest), and novelty (perceived innovation) (Schrepp, 2023). The practical relevance of these dimensions varies across the ordering journey. An understandable interface supports product selection, efficiency helps users complete orders promptly, dependability matters when payment and order-status information must be accurate, and stimulation or novelty can affect continued engagement beyond a routine transaction. These dimensions accordingly support actionable comparisons for digital retail managers.

This study evaluates the two applications among users residing in Jakarta, Bogor, Depok, Tangerang, Bekasi, and Bandung. It compares six UEQ means, reports their benchmark classifications, and tests paired differences for the same participants. Open-ended feedback is used as supplementary context for identifying usability concerns and opportunities for improvement. By separating descriptive score rankings from statistically supported differences, the study seeks to provide a balanced account of the applications' comparative strengths.

Method

Research design and respondents

A comparative quantitative survey was conducted among users of the Kopi Kenangan and Fore Coffee mobile applications in Greater Jakarta and Bandung. Purposive sampling was used. Eligible respondents were aged 18–45 years, lived in one of the designated areas, had used both applications, and had completed transactions through both platforms. The questionnaire was administered online through Google Forms. Each respondent evaluated both applications, providing paired observations for the same six UEQ dimensions.

The source study reported a minimum recruitment target of 97 participants based on Cochran's formula and obtained 100 respondents. Because selection was purposive, this target should be regarded as a practical sample-size benchmark, not evidence of probability-based representativeness. The recorded eligibility conditions establish prior use and a transaction on each platform, but they do not define a uniform recency or frequency of app use. Consequently, the findings pertain most directly to the surveyed dual-app users.

Measures and analytical procedure

The standard UEQ comprises 26 semantic-differential items grouped into attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty (Laugwitz et al., 2008; Schrepp, 2023). Scale-level analyses were carried out using UEQ Data Analysis Tool version 12, and the two applications were compared with the UEQ Compare Products function. Mean values and variances were used to describe each dimension; benchmark

comparisons were used to position these values relative to the dataset implemented in the analysis tool (Schrepp et al., 2017). Specific benchmark reference-group details were not recorded in the available report, so the categories are treated as descriptive comparisons.

The study also reported Pearson item-correlation checks and Cronbach's alpha reliability assessments for the two sets of UEQ responses. These checks supplement the established instrument, although the available results provide only the reported validity decisions and alpha thresholds, without item-level correlation tables or exact reliability coefficients. Accordingly, the numerical results presented below are limited to the original study outputs.

A paired-sample t-test was applied separately to each UEQ dimension using a nominal significance level of .05. The unit of comparison was the within-person evaluation difference, not two independent respondent samples (Hsu & Lachenbruch, 2005). The sample size of 100 supports approximate inference for mean differences under suitable conditions, but it does not by itself confirm normality of the individual paired differences. The reported results contain p values, while paired-difference standard deviations, test statistics, confidence intervals, and effect sizes were not included. Thus, the discussion distinguishes the available significance tests from descriptive score differences; no formal practical effect-size estimates are asserted.

The questionnaire additionally collected open-ended feedback concerning strengths and weaknesses. Those responses were summarized in the study as contextual observations about navigation, service reliability, loyalty features, and customization.

Results and Discussion

Respondent characteristics and instrument checks

The analysis comprised 100 eligible respondents, of whom 61% were women and 39% were men. Most respondents were aged 18–25 years (82%), while the 26–35 and 36–45 groups each represented 9%. University students formed the largest occupation group (59%), followed by employees (26%) and entrepreneurs (10%). Respondents lived in Jakarta (27%), Bandung (18%), Bekasi (16%), Tangerang (14%), Bogor (13%), and Depok (12%). These figures confirm that the survey reached all targeted areas, but the substantial concentration of younger respondents limits direct generalization to older coffee-app users. The source UEQ inconsistency checks classified all 100 paired response sets as acceptable using an inconsistency threshold below 3.

All 26 UEQ items for each application were reported to have Pearson correlations above the source r-table value of .195, and all reported Cronbach's alpha assessments exceeded .70. These findings indicate that the source study classified its questionnaires as valid and internally consistent.

UEQ scores for both applications

Table 1 brings the original UEQ mean scores and variances into an editable format. Both applications scored above .80 for all six scales, indicating a broadly positive evaluation according to the study's stated interpretation. For Kopi Kenangan, perspicuity received the highest mean (1.920) and novelty the lowest (.948). For Fore Coffee, efficiency was highest (1.990), while novelty was again lowest (1.178).

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Table 1. UEQ means and variances for the two applications

UEQ dimension	Kopi mean	Kopi var.	Fore mean	Fore var.
Attractiveness	1.820	0.61	1.920	0.66
Perspicuity	1.920	0.79	1.958	0.83
Efficiency	1.880	0.75	1.990	0.73
Dependability	1.555	0.79	1.768	0.88
Stimulation	1.438	1.06	1.695	0.84
Novelty	0.948	1.21	1.178	1.33

Although the two profiles are similar in several functional dimensions, Fore Coffee obtained higher sample mean scores on all six. The reported variances also suggest substantial variation in users' ratings, particularly for the novelty dimension in both applications. A higher observed mean does not, by itself, establish a statistically reliable difference between the two app experiences.

Cross-application comparison and benchmark results

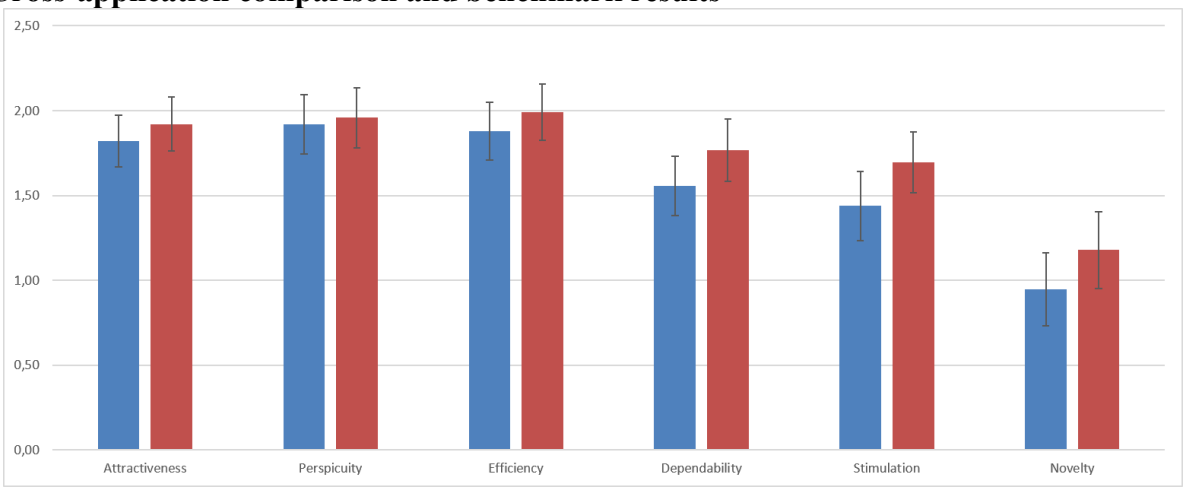


Figure 1. Comparison of UEQ mean scores for Kopi Kenangan and Fore Coffee (source: study UEQ output).

The original comparison chart (Figure 1) shows the same directional pattern observed in Table 1. The three aggregated UEQ aspects follow this pattern (Table 2). Fore Coffee scored higher in attractiveness (1.92 versus 1.82), pragmatic quality (1.91 versus 1.79), and hedonic quality (1.44 versus 1.19). The largest gap among these summaries concerns hedonic quality, suggesting that experience-oriented features are a plausible area of differentiation in the sample. These aggregated scores remain descriptive and are not substitutes for paired significance testing.

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Table 2. Three aggregated UEQ aspects

Aspect	Kopi Kenangan	Fore Coffee
Attractiveness	1.82	1.92
Pragmatic quality	1.79	1.91
Hedonic quality	1.19	1.44

The source UEQ benchmark classified Kopi Kenangan as Good in attractiveness, perspicuity, efficiency, dependability, and stimulation, with novelty Above Average. For Fore Coffee, attractiveness, efficiency, and dependability were classified as Excellent; perspicuity, stimulation, and novelty were Good. Figures 2 and 3 reproduce the benchmark graphics, excluding the surrounding spreadsheet interface for readability. As the benchmark reference group and version were not specified, category comparisons are reported as the software output's descriptive labels, not as fixed industry-wide standards.

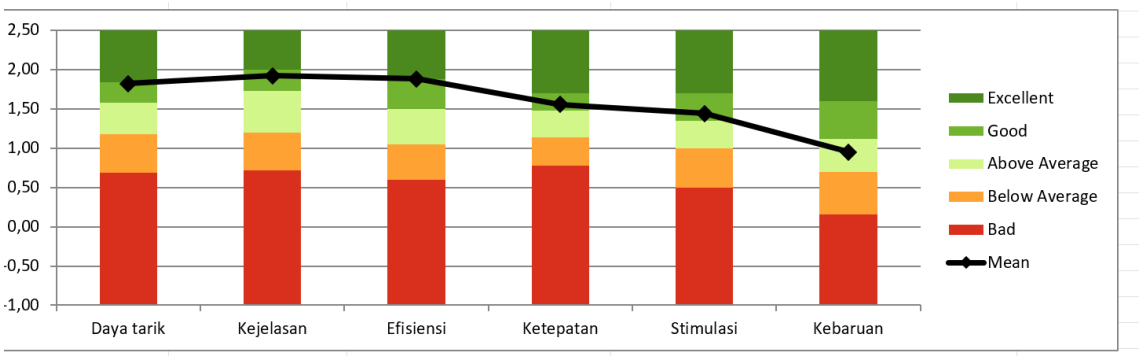


Figure 2. Kopi Kenangan UEQ benchmark profile (source: study UEQ output).

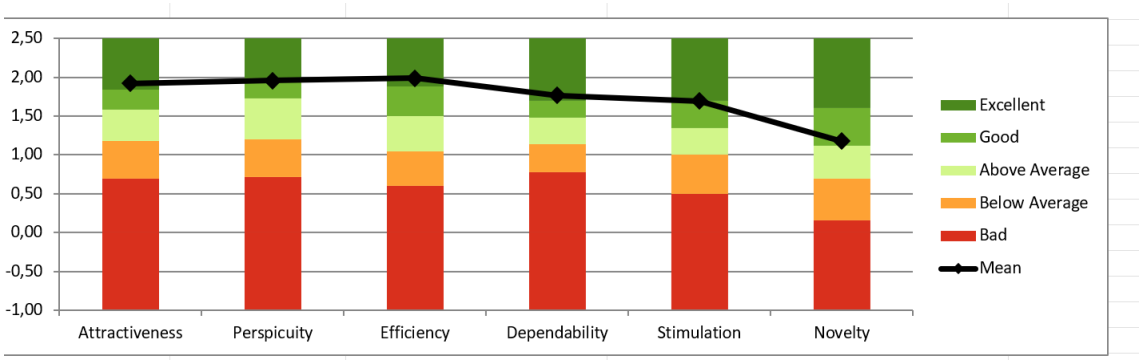


Figure 3. Fore Coffee UEQ benchmark profile (source: study UEQ output).

Paired-sample differences

Table 3 reports the six available paired-test p values alongside the arithmetic differences between the two reported scale means (Fore Coffee minus Kopi Kenangan). The mean differences are directly calculated from the available scale summaries and are not standardized paired effect sizes. A nominal two-sided criterion of $p < .05$ was used in the original study.

Table 3. Paired-sample comparisons of UEQ dimensions

Dimension	Mean gap	p value	Finding at .05
Attractiveness	+0.100	.114	Not significant
Perspicuity	+0.038	.642	Not significant
Efficiency	+0.110	.089	Not significant
Dependability	+0.213	.004	Significant
Stimulation	+0.257	.003	Significant
Novelty	+0.230	.025	Significant

Dependability showed a mean advantage of .213 for Fore Coffee ($p = .004$). This result is relevant to users' sense of control and predictability during ordering, payment, and service follow-up. Stimulation had the largest observed six-dimension difference (+.257, $p = .003$), suggesting a more engaging experience among the surveyed dual-app users. Novelty also favored Fore Coffee (+.230, $p = .025$), consistent with users perceiving comparatively more originality or variation in its interface or features. The sizes of these mean gaps should not be equated with standardized effect sizes, as the paired-difference variance was not supplied.

Attractiveness (+.100, $p = .114$), perspicuity (+.038, $p = .642$), and efficiency (+.110, $p = .089$) showed positive differences in Fore Coffee's favor but did not reach the stated significance threshold. The evidence therefore does not support a statistically established advantage for Fore Coffee in these three dimensions. Because six separate tests were assessed at nominal .05 without a documented multiplicity adjustment, the inferential results should be interpreted as exploratory. No paired t values, confidence intervals, or formal effect-size estimates were available for a stronger appraisal of the differences.

Managerial implications and user feedback

The paired results indicate a practical distinction between maintaining functional usability and addressing experiential differentiation. Both applications received favorable scores for perspicuity and efficiency, suggesting that app designers should preserve clear product navigation and uncomplicated ordering flows. Fore Coffee's stronger reported dependability score also points to the importance of reliable transaction feedback, accurate order status, and responsive support during service interruptions. UX-based recommendations in this area align with the general usability principles of visibility of system status and error recovery (Nielsen, 2024).

The open-ended feedback described concerns relating to customer support, delivery-time estimates, and the coordination of delivery services. These comments provide useful context for examining dependability problems, but they do not quantify the frequency of each issue. The feedback also referenced interest in loyalty programs, personalization, and product customization, particularly for Fore Coffee. These observations are consistent with considering stimulation and novelty in future design updates, without establishing that any particular feature caused the observed scores.

For Kopi Kenangan, follow-up improvements could prioritize evaluating the distinctiveness of ordering features and the predictability of service information, while retaining its comparatively favorable perspicuity score. For Fore Coffee, maintaining clarity

and efficiency remains important alongside any experiments with loyalty or customization features. Both brands would benefit from usability tests that observe actual transaction tasks, confirm the timing of app use, and compare outcomes across a more balanced distribution of ages and shopping habits.

Limitations

This study used non-probability purposive sampling and recruited respondents who had experience transacting through both applications. Such participants may be more engaged with coffee-ordering technology than the general consumer population. Most were 18-25 years old, and the available record does not specify the recency or frequency of each participant's application use. The comparison also relied on self-reported UX ratings, with no independent observation of transaction completion or system error rates.

The available analysis contained UEQ means, variances, benchmark classifications, and p values but not complete paired-test statistics or item-level psychometric results. Feedback from open-ended questions was summarized without a documented coding framework or response counts. Accordingly, the results offer an informative cross-application comparison, while further work with behavioral measurements and fuller statistical reporting is needed before drawing stronger general conclusions.

Conclusion

The comparative evaluation of 100 users of both Kopi Kenangan and Fore Coffee showed positive experiences on every UEQ dimension for both applications. Fore Coffee achieved higher sample mean scores in attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty. Nonetheless, the paired tests identified statistically significant differences only for dependability ($p = .004$), stimulation ($p = .003$), and novelty ($p = .025$). The three remaining dimensions were not statistically different at the nominal .05 level. The findings therefore support a more specific conclusion: within this surveyed group, Fore Coffee performed more favorably on system predictability and experience-oriented dimensions, whereas clear superiority across all aspects was not established.

Future evaluations can strengthen these findings by reporting complete paired statistics, collecting more balanced age groups, recording prior application use, and incorporating observed ordering tasks. For both coffee retailers, attention to dependable order handling, consistent navigation, and purposeful feature innovation offers a practical direction for iterative improvements.

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