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Revealing User Perception and Mental Model in My Tel-U Apps: A UX and Integrated Method

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***Abstract*—My Tel-U app user experience and usability were tested using a mixed-methods design with both quantitative and qualitative measurements. User experience was measured quantitatively using the User Experience Questionnaire (UEQ), as well as general satisfaction assessed by the Customer Satisfaction Score (CSAT), and task-based usability testing to evaluate actual user interaction. Thirty participants from different faculties and levels of study at Telkom University joined to experience various digital exposures and acclimate their behaviour to the application. UEQ results indicate overall positive attitudes across all six scales, with Perspicuity, Attractiveness, and Dependability achieving the highest scores. CSAT was 90%, indicating that most users were satisfied or very satisfied with the application. Although task accomplishment increased, usability testing revealed that problems such as slowness, poor navigation organization, and inadequate system feedback persisted. Open-ended questions confirmed similar issues, such as core functionality like grade viewing and attendance tracking, as well as ongoing concerns about performance and reliability. These results indicate that, although the application adheres to functional requirements, user support, response time, and clarity may need improvement in certain aspects. This research contributes to an integrative UX evaluation model by incorporating perceptual, emotional, and behavioural measures. The results provide positive feedback to developers and institutional stakeholders, justifying priorities for alterations that will make the My Tel-U app more accessible, user-friendly, and support long-term usage on the online learning platform.**

***Index Terms*—User experience (UX), usability testing, mobile application, My Tel-U, mixed-methods evaluation.**

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I. Introduction

User experience (UX) today is no longer about visual appearance or response time but about learning even more about how users think, feel, and behave while operating digital systems. One of Don Norman's reiterated ideas in 2013 emphasized that user-centred design must remain keen on understanding the goals and mental models of users so that technology will adapt itself to human behaviours [1]. User need identification, voice of customer (VoC) capture, and behaviour pattern prediction are most important in usage research. Thus, the developer may need to consider user rejection and system disengagement. Without the proper alignment of user expectation identification and system capability mapping, digital platforms will tend to deliver functionally correct but emotionally irrelevant capabilities. Jakob Nielsen, in 1994, also mentioned that usability is a quality attribute, including learnability, efficiency, memorability, error tolerance, and satisfaction. Hence, the application of qualitative methodologies, such as observational studies, task-based testing, and open feedback, facilitates a more comprehensive evaluation [2]. Systematic analysis of UX not only uncovers immediate usability issues but also offers longer-term system applicability by adapting to evolving user behaviour [3], [4]. Especially in universities, where submissions form the foundation of academic activities, failing to engage with actual user voices can result in misdirected innovations that fail to meet student needs or institutional goals [5].

My Tel-U is an application that facilitates the Telkom University learning process by providing access to basic functions, such as course enrollment, attendance, and grade recording. In addition to its utilitarian value, achieving the highest possible user satisfaction is crucial for providing users with ease, efficiency, and pleasure. However, like many academic websites, My Tel-U is plagued by all-too-common UX issues such as a lack of navigation, delay, and unresponsive user feedback. These issues do not merely exist within the confines of existing research. However, it presents actual sources of frustration for users in their everyday use of the software. Students have complained about everything from undefined grade display to overly complicated attendance navigation and sluggish response times. Such consistent feedback indicates a growing need for end-to-end UX testing that encompasses both technical and affective user interaction

aspects. Previous literature highlights the necessity: [6] concluded that a significant expectation-performance gap exists; [7] identified room for usability improvement; and [8] found that effort perception and users' perception of service quality influence their reuse intention. It requires regular and intensive UX testing to ensure that the system continually updates itself to meet the evolving needs of students.

Considering these issues, the objective of this study is to analyze the My Tel-U app through an integrated user experience (UX) assessment from the viewpoints of user perception (using UEQ), user satisfaction (using CSAT), and real behaviour interaction (through task-based usability testing). The aim is to identify both perceived and actual usability issues, and to study user preferences, pain points, and real-world expectations of the app's use. The primary contribution of this research is to offer a combined methodological approach to supplement quantitative and qualitative UX measures. Drawing on user impressions, satisfaction scores, and real interaction behaviour, this study provides evidence-based recommendations and specific guidance on how to optimize My Tel-U's usability and extended usability as an e-academic service portal.

II. Literature Review

A. User Experience (UX) and Its Importance in Educational Applications

User experience (UX) in learning applications encompasses the entire interaction among students, instructors, and digital devices, emphasizing usability, accessibility, and emotional satisfaction. UX in this context integrates several key considerations. First, user-centered design focuses on the cognitive and affective needs of users through ongoing cycles of feedback to maximize engagement. A user-centred design results in a more intuitive and beneficial learning process [9]. Second, utility and usability are crucial in achieving optimal learning outcomes. Utility refers to the effectiveness of an application in making the learning process smoother, while usability refers to the ease of use and simplicity of the interface. Equilibrium among these elements results in an efficient learning process [10]. Third, cognitive load management involves creating interfaces that minimise cognitive load by employing a rational hierarchy of information and utilising multimedia, such as animations and static images. The aim here is to improve memory and enhance user comprehension of the material that is displayed to them [10], [11]. While UI is primarily concerned with aesthetic appeal, UX is concerned with the entire user interaction process, including factors such as satisfaction and usability.

UX in learning applications is influenced by several factors, categorized into three general areas: usability elements, learner-focused factors, and support systems. The first category influencing UX is usability elements, and they include navigation, visual communication design, and feedback systems. Simple navigation and structure reduce user bewilderment, especially in complex systems such as health reporting or e-learning systems. Effective visual communication design, including sparse layouts, robust typography, well-choreographed colour schemes, and clear icons, encourages higher accessibility and lower cognitive load. In addition, real-time feedback mechanisms, such as tracking progress and error messages, enhance users' confidence and task performance rates. The second consideration is learner-centred factors, namely interest, motivation, and cognitive load. Students' intrinsic goal-aligned applications, such as personalized learning streams, enjoy higher satisfaction levels. Overly intricate interfaces or content-dense segments can deter users, whereas interactive visualizations, such as videos and interactive elements, result in higher comprehension. The third element that affects UX is support mechanisms, including user interaction aspects and user-centred iteration. Functions that enable peer interaction, such as discussion boards and group assignments, facilitate learning through the community and promote sustained engagement.

Furthermore, agile development methodologies with ongoing feedback led to applications that adapt to changing education needs [10], [12]. Previous research indicates that poorly designed UX, characterized by ambiguous interfaces or inconsequential support features, can lead to application abandonment. Conversely, well-designed, motivation-oriented designs are associated with long-term adoption. Drawing on recent research from 2023–2024, this review emphasizes the importance of incorporating UX principles into learning apps to enhance a more efficient and effective learning process.

B. User Experience Questionnaire (UEQ)

The User Experience Questionnaire (UEQ) is a psychometric validated, quantitative scale that measures user experience across six critical dimensions. It has been designed using rigorous psychometric procedures and provides a systematic way of quantifying both pragmatic and hedonic aspects of interactive products [13]. The UEQ evaluates the user experience with 26 semantic differential items on six derived scales based on large-scale factor analysis and validation studies [14], [15]. The six scales are attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty. Attractiveness measures the overall visual appeal of an interface, such as its aesthetic quality and appearance. Perspicuity focuses on learnability and knowability, emphasising that users must quickly and easily learn the system. Efficiency is measured by task completion speed, which considers how quickly and effectively the system allows users to accomplish their needs. Dependability considers predictability and user control, assessing the system's ability to instil a sense of security and reliability. Stimulation tests emotional stimulation and finds the amount of stimulation and motivation the interface generates. Finally, novelty is a measure of the extent of innovation and creativity, as well as the degree to which the system provides a new and engaging experience [16]. These dimensions are each quantified by items, six for attractiveness and four for the other dimensions. The UEQ employs a 7-point Likert scale ranging from -3 to +3, which aims to minimise central tendency bias. Such a setup gives an equal weighting, combining pragmatic attributes (perspicuity, efficiency, dependability) and hedonic attributes (stimulation, novelty) to create an overall measure of user experience.

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Table 1.
UEQ Assessing on Application

Application	Reference	Key Findings	Implications
Multimodal Experience Evaluation (UEQ-G)	[17]	UEQ-G detected differences in manipulated service conditions (high vs. low efficiency) across all scales except Perspicuity. Strong correlations with established UX tools validated its reliability.	UEQ-G is suitable for assessing combined product-service experiences in various industries.
Online Transportation Apps (Grab, Gojek)	[18]	Efficiency was a strength, while issues with dependability in payment systems were identified. UX scores correlated with societal lifestyle trends.	UX plays a critical role in user retention, influencing app adoption and long-term engagement.
Transportation App Analysis (KAI Access)	[19]	Efficiency and Dependability scored high, while Perspicuity and Novelty were weak. Low Stimulation scores are linked to user complaints.	The findings led to interface redesigns aimed at improving navigation and engagement.
Higher Education Website (Raden Mas Said State Islamic University)	[20]	Attractiveness (1.28/3) and Efficiency (1.56/3) performed well. All dimensions ranked "above average," but novelty lagged.	Benchmarking results informed interface update priorities.
Government Portal Redesign (Inaportnet)	[21]	Low Stimulation (-0.27/3) due to outdated visuals, but Efficiency (1.56/3) and Dependability (1.57/3) were rated "Good."	Results guided redesigns to enhance navigation and visual engagement.
Health Apps (Alodokter)	[1]	Navigation, responsiveness, and error issues were reported. Clarity scored highest (2.41); Novelty was lowest (1.75). Overall "Excellent" UEQ.	Identifies specific usability problems and suggests the need for design improvements, particularly in fostering innovation and engagement.

Recent trends in research have highlighted a range of significant developments regarding the use of UEQ. Most significant among these developments is the development of UEQ+ and UEQ-G, enabling modular adaptation for products and services with a more generalizable application across areas of use.

UEQ has also been used comprehensively as a benchmarking tool, with over 500 studies adding to an international database for comparison. This high-volume dataset enables practitioners and researchers to gauge the performance of individual systems against industry standards. Moreover, subsequent studies have assigned importance weights to UEQ scales for computing UX measures in aggregate, making it even more efficient as a measurement tool for user satisfaction and quality of experience. The following table provides an overview of recent studies utilizing the User Experience Questionnaire (UEQ) across various disciplines, including primary results and implications.

Table 1 illustrates the versatility of the UEQ in evaluating user experience across diverse domains, including transportation, education, and government services. The findings indicate that most applications are high in efficiency and dependability, but novelty, stimulation, and perspicuity are frequently below par. UEQ test results have been instrumental in guiding design enhancements to ensure that digital platforms meet user expectations and maximize satisfaction. By offering a formalized procedure, UEQ continues to be an evolving and credible tool for both university-led and industry-focused UX optimization. Given its quantitative indications of both pragmatic and hedonic user experience, it continues to be applied more extensively to investigate and refine interactive products.

C. Customer Satisfaction Score (CSAT)

Customer satisfaction (CSAT) is among the most vital performance metrics used to determine the level of satisfaction customers have with a firm's services or products. It is usually quantified by conducting surveys among consumers, who are asked to respond on a scale of 1 to 5, where five represents "very satisfied" and one represents "very dissatisfied". CSAT is widely used in the service and marketing sectors, as it indicates the extent to which a product or service meets customer expectations [22], [23], [24]. The CSAT score is calculated using the formula:

$$CSAT(\%) = \left(\frac{Number\ of\ satisfied\ responses}{Total\ number\ of\ responses}\right) \times 100 \quad (1)$$

This metric is typically applied because of its ease of use and the immediate customer experience feedback it provides. However, survey exhaustion and low return rates can jeopardize data reliability with this measure. CSAT is frequently contrasted with other metrics of customer loyalty and satisfaction, such as the System Usability Score (SUS) and Net Promoter Score (NPS). While CSAT measures customer satisfaction at a specific time with a specific event, Net Promoter Score is based on whether a customer would recommend a company to others. This comparison illustrates how to consider the level of satisfaction at a particular moment rather than looking at the long-term relationship with the consumer and the resulting business expansion [23], [25], [26]. On the other hand, the SUS scale is meant to measure the usability of a product or service, with an emphasis on usability and not loyalty or satisfaction [27].

D. Comparison and Rationale

For a holistic decision regarding the My Tel-U application, this study employs three complementary usability measuring tools: UEQ, CSAT, and task-based usability testing. Each measure captures unique information regarding user experience and system use.

Table 2.
Fulfilment of UX Evaluation Aspects by UEQ, CSAT, and Usability Testing

UX Evaluation Aspects	UEQ	CSAT	Usability Testing
Assessing user perception of the interface	✔	✔	✘
Measuring overall satisfaction	✘	✔	✘
Observing user behavior while using the application	✘	✘	✔
Find out which features are technically problematic	✘	✘	✔
Provides an in-depth UX profile (UX dimensions)	✔	✘	✘
Provides insights based on real user experiences	✘	✘	✔
Easy to analyze statistically	✔	✔	✔/✘
Provides specific recommendations based on feature interactions	✘	✘	✔

Table 2 illustrates that user experience cannot be accurately measured with a single tool. UEQ measures users' emotional and cognitive sentiments on systematic scales, CSAT provides a single-item overall satisfaction score, and usability testing identifies real-use problems and behavioral tendencies. Together, these three tools provide a comprehensive UX measurement, encompassing user perceptions, satisfaction levels, and actual usage patterns. UEQ was selected to gauge multifaceted user perception of pragmatic and hedonic attributes, representing a means of assessing how users responded functionally and affectively to the interface. UEQ on its own is not sensitive to real-time behavior issues; however, it is hence supported by CSAT, which provides a general user satisfaction score in an easily interpretable and concise format but is less diagnostic for pinpointing feature-level issues [28]. To overcome this limitation, usability testing is also provided to observe real user behavior, emphasizing task success, ease, and confusion points. This process reveals inherent usability issues that would not be detected in perception surveys. The decision to use these three instruments simultaneously, neither individually nor in conjunction with an excessive number of additional tools, was based on the principle of method triangulation, also known as methodological balance. Using them separately risks the exclusion of essential UX elements, and the inclusion of other instruments (SUS and TAM) would be redundant or overly complicate data synthesis. The selected techniques complement each other in terms of scope and level of detail, providing both breadth and specificity to user experience and usability testing.

III. Research Method

The study employs a mixed-methods approach, collecting both quantitative and qualitative information to quantify the user experience and usability of the My Tel-U application. Quantitative techniques, such as the CSAT and UEQ, are used to quantify users' subjective ratings and overall satisfaction. These are accompanied by qualitative task-based usability testing for real-user interaction against scripted scenarios. The selection was based on methodological triangulation to account for perception, satisfaction, and behavior. The mixed-method approach provides a more detailed description of what users perceive, experience, and expect when they use the app. The survey has four main sections:

1) *The UEQ is used to measure six primary dimensions of user* experience.
2) *CSAT is employed to quantify the overall user satisfaction* with the My Tel-U application.
3) *Usability testing tasks*, where participants were asked to complete a set of core tasks such as checking attendance, accessing course schedules, and checking their electronic student ID. Observations were made regarding task completion rate, number of errors, and user comments.
4) *Two open-ended questions are asked of the respondents*: (a) "Which feature do you like most?"; (b) "Which feature annoys you most?". From this qualitative data, specific application features that enhance or detract from the user experience are identified.

This study employed purposive sampling, focusing on Telkom University students who regularly use the My Tel-U application. Participants were selected from diverse faculties and academic levels to ensure variation in digital behavior and familiarity with the system. Data collection was conducted online, where respondents completed the UEQ, CSAT, and task-based usability testing instruments. Usability metrics such as task completion rate and error frequency were recorded. All participants were provided with prior information about the study and gave informed consent, acknowledging that data would be collected and processed following ethical research standards. UEQ data were analyzed using descriptive statistics to obtain mean scores and confidence intervals for each scale, following standard UEQ interpretation guidelines. CSAT results were aggregated to determine overall user satisfaction. Qualitative data from usability testing were analyzed through thematic coding to uncover usability issues and behavioral patterns, while open-ended responses were categorized to identify frequently mentioned positive and negative features.

IV. Result

This section consolidates the findings obtained from measurement of the My Tel-U app from data collected with the UEQ, CSAT, task-based usability test, and free-text comments. The objective is to capture the quantitative and qualitative dimensions of user interaction and perception and thus report on potential usability issues and user expectations. Results are put across in structured sub-sections, and subsequently integrative discussion comparing and interpreting the contribution of each data source.

A. Respondent Characteristics

This sub-section gives an account of participants' demographics and usage patterns. Understanding participants' background knowledge is essential for contextualizing their responses and ascertaining if their interaction behaviors with the My Tel-U application are representative of student users.

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Table 3.
Respondent Characteristics

Characteristics	Summary
Gender	56.7% male (17), 43.3% female (13). This relatively balanced gender distribution supports diverse UX representation.
Faculty	The majority from FRI (76.7%, 23), followed by FIT (13.3%, 4), and 1 respondent each (3.3%) from FEB, FIK, and FKS. Feedback is reflective mainly of technology and engineering students.
Semesters	Most respondents were in semester 4 (46.7%, 14). Others: semesters 2 and 3 (each 13.3%), semesters 1 and 8 (each 10%), and semester 6 (6.7%). The majority were mid-level students actively using the app.
Frequency of Application Usage	46.7% used the app multiple times a week, 40% used it weekly or less, and 13.3% used it daily. Indicates strong engagement, although some lower activity may indicate usability issues.

Based on Table 3, 30 students participated in the survey, of which 56.7% were male and 43.3% female. The majority (76.7%) were FRI students, of whom the majority (46.7%) belonged to the 4th semester. In terms of use, nearly half (46.7%) used the My Tel-U app multiple times a week, indicating that the app is an integral part of campus life. Although this study does not apply statistical testing across respondent groups, early patterns suggest that characteristics such as academic semester and frequency of app usage may influence perceived usability. For instance, students in higher semesters who use the application more frequently may be more sensitive to inefficiencies or inconsistencies in app performance, as reflected in certain variations in ease-of-use scores and open-ended feedback.

B. User Experience Evaluation (UEQ)

This subsection explains the result derived from the UEQ, which measures six aspects of user experience: attractiveness, perspicuity, efficiency, Dependability, stimulation, and novelty. Each of these dimensions is researched in terms of the average rating and its corresponding interpretation criterion. The results indicate the quality of user experience with the application. To determine the internal consistency of UEQ scales, Cronbach's Alpha was calculated for all six dimensions. As evident from Table 4, all scales were highly reliable, with Alpha coefficients ranging from 0.71 to 0.90.

Table 4.
Internal Consistency of UEQ Scales

UEQ Scale	αValue	Cronbach's α	Interpretation
Attractiveness	>0.7	0.90	Excellent
Perspicuity		0.80	Good
Efficiency		0.82	Good
Dependability		0.71	Acceptable
Stimulation		0.72	Acceptable
Novelty		0.71	Acceptable

Attractiveness (α = 0.90) was the most reliable scale, with high item consistency, for measuring global impression. Scales of efficiency and perspicuity were also found to be internally consistent, with α coefficients of 0.80 and 0.82, respectively. The remaining three scales of Dependability, Stimulation, and Novelty were all established with Alpha values ranging from 0.71 to 0.72, which was slightly higher than the commonly accepted minimum of 0.70 for social science research reliability. These results validate that the UEQ instrument used in the present research is statistically reliable for measuring the user experience of the My Tel-U app. The UEQ tests six factors of extreme significance: attractiveness, perspicuity, efficiency, Dependability, stimulation, and novelty. Table 5 gives mean and variance per factor, based on 30 valid responses.

Table 5.
Mean and Variance of UEQ Scales

Scale	Mean	Variance
Attractiveness	1.639	1.11
Perspicuity	1.825	1.23
Efficiency	1.292	1.30
Dependability	1.483	1.05
Stimulation	1.325	1.16
Novelty	1.208	1.17

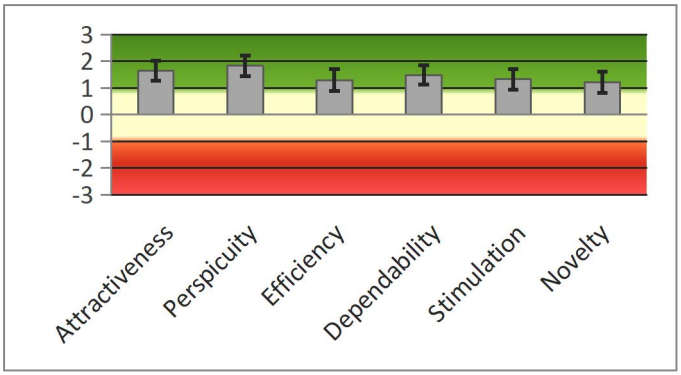

Fig. 1. Mean diagram.

Figure 1 shows that the Perspicuity scale was the most prominent at 1.83, which means users find the application easy to understand, clear, and simple to learn. This aligns with the purpose of app design, which aims to make academic procedures easy to accomplish without being overly complicated. The attractiveness scale ranked second highest at 1.64, indicating that the app was considered pleasant and visually appealing. Users also have a generally favourable impression when using My Tel-U. Dependability was rated at 1.48, indicating that users trust the app to perform reliably and consistently. This is especially important within the academic environment, where system malfunctions could disrupt critical procedures, such as attendance or grade checking. Both the stimulation (1.33) and efficiency (1.29) dimensions show an adequate experience, though not superior. While users find the app to be very effective and not boring, there remains some potential to enhance the interactions so that they are more exciting and faster. Finally, novelty received the lowest score of 1.21, but it is still positive. This suggests that, although the app

is effective, it does not appear to be particularly new or cutting-edge to users. In addition to individual scales, the UEQ framework also categorizes experience into two higher-order qualities.

Table 6.
Pragmatic and Hedonic Quality

Component	Mean
Attractiveness	1.64
Pragmatic Quality	1.53
Hedonic Quality	1.27

As shown in Table 6, the pragmatic quality score is higher (1.53) than the hedonic quality score (1.27), suggesting that users are more satisfied with the functional and task-related aspects of the app than its emotional engagement or innovativeness. To better understand the significance of these results, the mean scores were compared with the UEQ benchmark dataset in Table 7. This benchmark includes a wide range of interactive products, allowing for a standardized interpretation of performance.

Table 7.
Benchmark Comparison of UEQ Scales

Scale	Mean	Comparison to Benchmark	Interpretation
Attractiveness	1.639	Good	10% of results are better, 75% worse
Perspicuity	1.825	Good	10% of results are better, 75% worse
Efficiency	1.292	Above Average	25% better, 50% worse
Dependability	1.483	Good	10% of results are better, 75% worse
Stimulation	1.325	Above Average	25% better, 50% worse
Novelty	1.208	Good	10% of results are better, 75% worse

The benchmark comparison in Fig. 2 shows that perspicuity was 1.83, ranking in the top 10% of other products in the UEQ benchmark set. This indicates users find the application easy to use and learn. Attractiveness and Dependability were also rated as Good, indicating most users saw the application as pleasant and reliable to use. Stimulation and efficiency both registered Above Average. These are good, but indicate potential for improvement, especially in the extent to which the interface was perceived as stimulating or efficient. Interestingly, novelty, the lowest of the six (1.21), was still rated as good, showing that even though the app is unlikely to be rated as very innovative, it was not viewed as old-fashioned. These scores, particularly those for the pragmatic quality aspects, are "above average" to "excellent" according to UEQ measures, indicating that the app operates well compared to other comparable productivity and learning programs. This generally results in a positive user perception, although some aspects still require improvement.

C. Customer Satisfaction Score (CSAT)

To complement the user experience analysis, a CSAT measure was taken using a single-item 5-point Likert scale. Participants were invited to assess their general satisfaction with the My Tel-U application, with 1 indicating "Very Unsatisfied" and 5 indicating "Very Satisfied". As shown in Table 8, most participants gave positive satisfaction ratings. Out of 30 participants, 17 respondents (56.7%) rated the application '4' (satisfied) and 10 respondents (33.3%) rated it '5' (very satisfied). Only two respondents rated a neutral score of 3, and 1 respondent rated it as 2.

Table 8.
Distribution of CSAT Ratings

Rating	Respondents	Percentage
Very Satisfied (5)	10	33.3%
Satisfied (4)	17	56.7%
Neutral (3)	2	6.7%
Dissatisfied (2)	1	3.3%
Very Dissatisfied (1)	0	0.0%

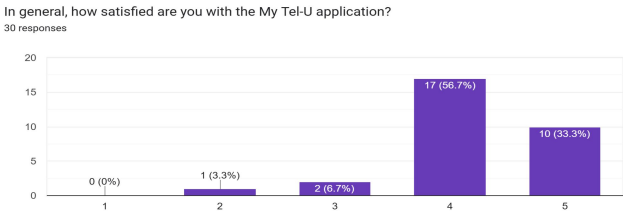

Fig. 3. CSAT chart.

Based on the CSAT formula, the application is rated 90% CSAT, indicating a high general user satisfaction. This result aligns with the positive scores in the UEQ analysis, indicating that the My Tel-U application effectively addressed the expectations of its student users in terms of usability and functionality. The CSAT result complements the high performance of the app in terms of user satisfaction, but further refinements would still benefit the small number of users who rated it below neutral.

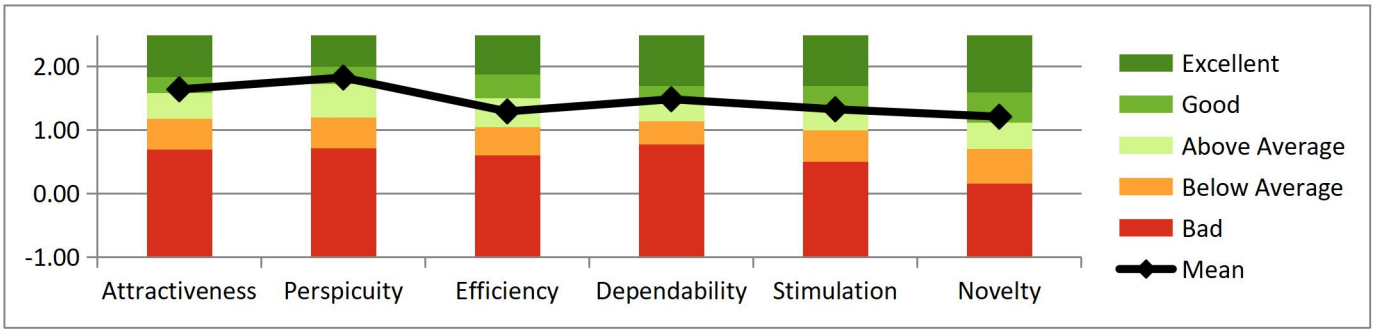

Fig. 2. Benchmark diagram.

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D. Usability Testing Results

This subsection presents the findings of task-based usability testing conducted on three of the most frequently used functions in the My Tel-U application: presenting the student ID card, viewing attendance records, and viewing semester grades. The performance of each task was measured in terms of completion success rate, ease of use, and users' comments about any vagueness or inefficiencies encountered during the process.

Table 9.
Usability Testing Results

Task	Completion Rate	Ease of Use (Mean)	Ease of Use (St. Dev.)
1	30/30 (100%)	4.73	0.52
2	30/30 (100%)	4.47	0.68
3	29/30 (96.7%)	4.47	0.81

During the first task, they were required to look at their student ID via the My Tel-U application. Table 9 shows that the first task was completed by all 30 respondents (100% completion rate), with an average ease of completion score of 4.73 and a standard deviation of 0.52.

Table 10.
Task Testing

Respondent	Success	Ease
Task 1 – View Student ID		
1	Yes	3
2	Yes	4
3	Yes	5
…	…	…
30	Yes	5
Task 2 – QR Attendance & View Status		
1	Yes	3
2	Yes	4
3	Yes	5
…	…	…
30	Yes	5
Task 3 – View Semester Grade		
1	Yes	4
2	Yes	4
3	Yes	5
…	…	…
23	No	2
…	…	…
30	Yes	5

Based on Table 10 (Task 1), although all participants selected “Clear Enough” in the confusion category and no significant ambiguity or usability issues were noted, a difference in ease scores remained. This can be viewed from a UX perspective as a subtle subjective variation in expectations or comfort with interaction. Some participants may have perceived the number of steps or interface clarity differently without necessarily experiencing apparent confusion. This encapsulates the concept of perceived usability, wherein not only success but also the smoothness of navigation and user expectations contribute to the overall experience.

The second task was to check attendance through QR code and verify the attendance status. As in Task 1, all participants successfully completed the task (100%), as indicated in Table 9. However, the ease of completion was slightly lower, with a mean of 4.47 and a standard deviation of 0.68. This difference score is supported by valuable user feedback, although some usability resistance is noted in Table 10 (Task 2). As one user commented, “sometimes I get confused in using this feature,” which reflects an incongruity of flow or mental model for QR code scanning and viewing the result. One said, “It is better to separate the list of attendance in the QR feature,” reflecting an information architecture issue where users desire separate functionalities for scanning and viewing records to improve ease of use. Feedback such as “It is clear enough, but the loading after scanning is quite a while” and “QR code is difficult to scan” are expressions of performance issues and scanning difficulty, both of which are core UX issues in mobile interaction. These findings indicate that while users could perform the task, the absence of concurrent feedback, delay, and coupling of QR code scanning and attendance status reduced perceived usability. It is a typical case of persistent UX issues with feedback timing and discoverability of the function.

In the third task, users were required to review their semester grades. In contrast to the two preceding tasks, a participant failed to complete the task, resulting in a completion rate of 96.7%. The average ease score for the third task was 4.47, with the most significant standard deviation among the three tasks (0.81), as shown in Table 9. Qualitative feedback presented several major issues highlighted in Table 10 (Task 3). “Loading takes quite a long time” refers to system responsiveness issues that detract from trust and patience, ultimately undermining user confidence. “The system is a bit complicated” and “the semester name is confusing” refer to navigation structure issues and naming inconsistency, which are crucial to information scent and orientation in digital systems. One user stated, "Value does not appear," a functional failure, which aligns with the single task failure recorded. From a UX standpoint, these results highlight how, although most users managed to find and interpret their grades, incidental cognitive friction, loading issues, and lack of immediate clarity in system feedback impacted the user experience. The greater standard deviation also indicates greater variation in perceived usability, possibly due to content presentation or technical disparities. These usability issues, such as confusion about semester labels, uncertainty after scanning QR codes, and delays in feedback, suggest a mismatch between users' mental models and the actual system flow [29] . This misalignment suggests that users' expectations, shaped by their prior experiences with digital systems, are not fully met by the application's current structure, which impacts both efficiency and trust [30].

E. Open-Ended Feedback: Enjoyable and Frustrating Features

As a complement to the systematic survey information, users were also asked to provide free-answer comments regarding the features they liked and disliked. Rich opinions and context-dependent issues that might not be picked up by quantitative measures are provided by qualitative feedback of this sort, and it is invaluable for refining the design and functionality of the application.

Table 11.
Most Liked Features

Features	Number of Respondents
Attendance/QR Scan	11
Student Grades	9
Timeline	7
Lecture Schedule	2
Scan Barcode	1
No Answer	1

Table 11 shows that the most frequently cited favourite feature was the attendance or QR-based presence feature, mentioned by 12 participants. Most participants said the attendance feature simplified in-class processes and was easier to use compared to the previous system (iGracias). Secondly, nine participants appreciated the grades feature because it made it convenient to view students' school performance. The Timeline function was cited by 6 participants as being enjoyable, particularly for public engagement, leisure, and everyday updates.

Table 12.
Most Annoying Features

Features	Number of Respondents
Student Grades	9
Attendance/QR Scan	6
Timeline	3
Schedule/Notification	3
Nothing is troublesome	6
Others (Sirama, news)	2
Scan Barcode	1

On the other hand, in Table 12, when respondents were asked what annoyed them most, grades were also the major grievance. 9 users complained of sluggish loading, incomprehensible formats (percentages instead of real scores), or outright failure to display data. The attendance feature, while generally praised, was also mentioned six times as a frustrating feature, implying that while it is helpful, users are struggling with QR scanning, unclear responses upon scanning, or difficulty navigating multi-component interfaces. Timeline messiness, delayed or ambiguous notifications, and unsynchronized schedules, respectively, were the issues raised by three participants. Interestingly, six participants did not mention any feature as especially frustrating. Regarding proposals, customers suggested enhanced performance, specifically for accessing the grades and attendance feature navigation. Some proposed that the user interface be simplified, semester data labelling be clarified, and additional learning services be incorporated on the platform, such as LMS access or health consultancy software. Other feature requests included dark mode, managing comments in Timeline, and more streamlined QR scanning processes. These qualitative results add to and enhance the outcomes of UEQ, CSAT, and usability testing. Users highly value basic scholarly functionality but are critical about issues concerning system responsiveness, information accuracy, and information transparency. The side-by-side comparison of a feature that is both loved and hated, such as attendance and grades, highlights the difference between the availability of a function and the quality of its implementation, a critical area of focus in UX design.

F. Discussion

This study presents a mixed-methods evaluation of the My Tel-U app, utilising an integrated combination of quantitative (UEQ and CSAT) and qualitative (task-based usability and open-ended feedback) measures. The combination of methods provides a balanced approach in terms of how users feel, are satisfied, and behave when interacting with the app. UEQ scores indicated overall positive functional ratings across all six scales, with the highest mean scores in perspicuity, attractiveness, and dependability. The pragmatic dimension of the system, such as clarity and dependability in task completion, was significantly stronger than the hedonic dimension of the system, namely innovation and stimulation. While the overall outcomes were satisfactory, the proportionally lower novelty score indicated moderate emotional engagement and lack of newness in user experience design. The reliability of the novelty scale was assured through sufficient Cronbach's Alpha values for all dimensions, confirming the internal consistency of UX measures. The CSAT score was 90% and except for UEQ, showing that most users were very satisfied or satisfied with the overall performance of the application.

Task-based usability testing, despite high completion rates (100% for two tasks and 96.7% for the other), still revealed specific usability frictions. The lowest ease-of-use score was for QR-based attendance and checking status, with complaints indicating issues such as slow response times, confusion during scanning, and unintuitive integration of the function. The grade view task also caused complaints about load time and unreadable semester labels, in one case leading to task failure. The open questions added richness to the results, providing valuable insights. Participants all praised the usefulness of academic features, such as attendance tracking, grade checking, and scheduling. However, these very features were also subject to complaint. The usefulness of features and the quality of feature implementation stood in stark contrast. The most important issues identified in the qualitative feedback were performance, feature discoverability, and the lack of interaction feedback, all of which can be mapped to classical usability heuristics. Suggestions for improvement were centred around optimisation for speed, simplifying the interface, and integration of additional features, e.g., real-time updating and integration into LMS.

Reference [8] used a UTAUT2 and DeLone & McLean model to confirm that effort expectancy, service quality, and information quality influenced the intention to continue use. Although their findings align with this research, the current

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findings provide empirical evidence that system responsiveness and interaction feedback are key elements of perceived service quality. Then, [6] with e-SERVQUAL and IPA reported a performance gap and areas for improvement, which this study validates with evidence of user action and affective response. Lastly, [7] revealed that SUS-based work rated the usability of My Tel-U as "Good", similar to the CSAT and ease-of-use outcomes in this study, but without the task-level detail and user sentiments presented here. By bridging perception, interaction, and user sentiment, this study offers a more holistic view of how My Tel-U functions in real usage. It underscores the importance of not only what features are present, but how they are experienced. Convergence with prior research further validates the results, while divergences highlight areas where detailed UX evaluation can provide actionable insights for system improvement.

V. Conclusion

This study evaluated user experience and usability of the My Tel-U app using a mixed-methods design that combined UEQ, CSAT, task-based usability testing, and open-ended feedback. Results showed that users tend to rate the app positively, particularly in terms of clarity and reliability, as evidenced by high satisfaction ratings and a high success rate in completing tasks. Nevertheless, several issues were observed, including slow loading, confusing navigation, and a lack of responsive feedback in priority functionalities such as viewing attendance and grades. While the app meets minimum functional standards, ongoing performance and interface clarity require enhancements. Methodologically, this study contributes a holistic UX evaluation framework by integrating perception, satisfaction, and behavior analysis and providing deeper insights for future research and iterative enhancement. However, this study is limited by its relatively small sample size and the use of a single institutional context, which may affect the generalizability of the findings. Future studies involving larger and more diverse user groups are recommended to validate and extend these results.

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