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Evaluating User Experience (UX) on Universitas Terbuka's Website: A Combined Survey and GTMetrix Performance Analysis

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***Abstract*— The Universitas Terbuka (UT) website serves as the primary platform for providing academic services and information to students, lecturers, and the general public. However, as the number of users and the complexity of digital services increase, User Experience (UX) becomes a crucial aspect that influences the effectiveness and user satisfaction in accessing information and utilizing available features. This study aims to evaluate and analyze the user experience of the Universitas Terbuka website using a combined approach, incorporating survey questionnaires and web performance analysis. The urgency of this research lies in the need to ensure that the UT website delivers an optimal experience for its users, particularly in terms of ease of navigation, access speed, information clarity, and responsiveness across different devices. With the growing reliance on digital systems in distance learning, UX evaluation becomes a strategic step in identifying challenges and opportunities for improvement. The novelty of this study lies in its holistic approach, which integrates subjective user feedback from surveys with objective web performance analysis. The findings of this research are expected to provide concrete recommendations for enhancing the UX quality of the Universitas Terbuka website, thereby supporting the effectiveness of distance learning and improving access to academic services.**

***Index Terms*— User Experience, Web Performance, Distance Learning, Universitas Terbuka, Testing,**

I. INTRODUCTION

The Universitas Terbuka (UT) website serves as the primary platform for providing academic services and information to students, lecturers, and the general public. As a higher education institution that implements a distance learning system, UT heavily relies on digital systems to ensure that all academic services are easily, quickly, and effectively accessible. The UT website functions as the main information hub, offering various features, including student enrollment, access to learning materials, academic services, and communication between students and lecturers. Therefore, the quality of user experience (UX) in accessing the UT website is a crucial aspect that needs to be studied and improved.

As the number of users and the complexity of digital services increase, maintaining the UX quality of the website becomes increasingly challenging. Users have high expectations regarding ease of navigation, access speed, information clarity, and website responsiveness across different devices. Poor UX can hinder learning effectiveness and academic interactions, potentially reducing user satisfaction. Thus, a comprehensive evaluation is essential to understand the extent to which the UT website meets user needs and to identify areas that require improvement.

In a study on User Experience (UX), an evaluation of the PaTik Bali application using the User Experience Questionnaire (UEQ) showed positive user experiences. From 34 respondents, the attractiveness (1.8), pragmatic quality (1.72), and hedonic quality (1.73) aspects received above-average scores, with a benchmark result of 1.73, confirming the application's comfort and efficiency [1]. Another study applied UX principles in designing the Rezti's Batik sales application using Design Thinking. The System Usability Scale (SUS) evaluation showed scores of 73 (administrator) and 83 (customer) in the excellent category, while the UEQ results in all aspects were also rated excellent [2]. Another study examined the implementation of User Experience Design (UXD) in developing a mobile application for coffee cultivation. This application aimed to bridge farmers and facilitators in sharing information, using a development process that included preliminary research, prototyping, user testing, and heuristic evaluation. The findings indicated that the application met user needs, as measured through ease of use and user satisfaction in a User Acceptance Test [3]. A study by Putri analyzed the performance of the Universitas Terbuka (UT) website to improve service efficiency. Testing was conducted using GTMetrix and Pingdom to identify strengths, weaknesses, and potential improvements. The study provided valuable insights for developers in optimizing the UT website's performance [4].

This research aims to identify key UX issues on the UT website and provide data-driven recommendations for improvements. The evaluation combines a subjective approach through survey questionnaires

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measuring users' perceptions of UX, and an objective approach through technical performance analysis using GTMetrix. This holistic approach allows for a comprehensive analysis of the user experience, covering both subjective perceptions and objective technical metrics that influence accessibility and usability.

The urgency of this study lies in the necessity to ensure that the UT website delivers an optimal user experience to support distance learning. As reliance on digital systems continues to grow, a non-optimized website can create barriers to accessing academic information and services. The novelty of this research lies in its combined approach, which not only collects user feedback but also objectively measures the website's performance. The findings of this study are expected to provide concrete recommendations for enhancing the UX quality of the UT website, thereby supporting effective distance learning and improving access to academic services for all users.

II. Literature Riview

A. *UX Testing*

UX Testing is the process of evaluating user experience when interacting with a system or website to identify weaknesses and improve usability. Common methods include survey questionnaires, interviews, and direct user testing. This testing helps to understand aspects of usability, accessibility, and user satisfaction. The results of UX Testing can be used to refine the design and functionality of a system, making it more responsive to user needs [5].

B. *Performa Testing*

Performance Testing aims to measure a system's speed, stability, and capacity in handling various workloads. This testing can be conducted using tools such as GTMetrix. Performance Testing is crucial to ensure a website operates optimally under different conditions [6]. Through this testing, developers can identify bottlenecks and perform optimizations to enhance system performance [7].

C. *UT website*

Figure 1. UT Website

The Universitas Terbuka (UT) website, ut.ac.id, is the official platform that provides academic, administrative, and digital services for students, lecturers, and the general public. This site serves as the main portal for online learning access, student registration, and various other academic services. With the increasing number of users, performance and user experience (UX) have become crucial aspects in ensuring ease of navigation and information accessibility. Evaluation and optimization of this website are necessary to support the effectiveness of distance learning, which is the hallmark of Universitas Terbuka [8].

D. *Performa Testing using dengan GTMetrix*

GTMetrix is a tool used to test and analyze a website's performance based on page load speed and resource efficiency. This testing provides metrics such as PageSpeed Score, YSlow Score, load time, page size, and the number of HTTP requests [9][10]. With GTMetrix, developers can identify factors that slow down a website, such as uncompressed images or unoptimized scripts. The analysis results help improve user experience and SEO optimization by enhancing site performance [11].

III. Research Method

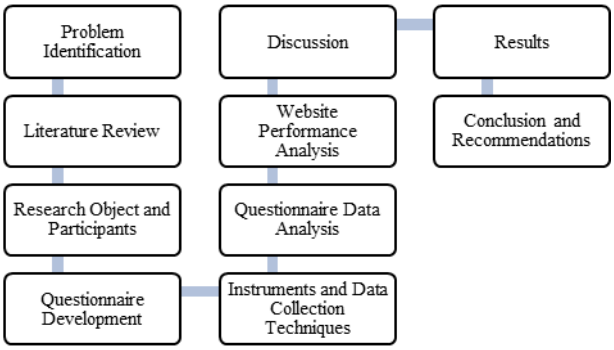

Figure 2. Research Method

This study begins with Problem Identification, identifying UX challenges on the Universitas Terbuka website. A Literature Review follows to examine related studies. The Research Object and Participants include UT website users, such as students and lecturers. Next, a Questionnaire Development phase designs a survey to assess navigation, speed, and responsiveness. Instruments and Data Collection Techniques involve online surveys and GTMetrix for performance testing. Questionnaire Data Analysis interprets user responses statistically. Website Performance Analysis evaluates technical aspects using GTMetrix. The Discussion section integrates findings from UX feedback and performance results. Finally, the Results and Conclusion and Recommendations provide insights and suggestions for improving the website.

IV. Discussion

A. *UX Testing*

User Experience (UX) is a crucial aspect in the development and evaluation of a website, encompassing how users perceive ease of use, efficiency, and satisfaction when interacting with a digital platform. UX testing is conducted to identify strengths and areas for improvement, ensuring that the website provides an optimal experience for its users. In the context of the Universitas Terbuka website, this UX testing aims to

understand how students and other visitors navigate the site, find information, and access key features provided.

In this study, the researcher measures user experience (UX) by designing a questionnaire covering 11 testing categories: Usage Frequency, Navigation Ease, Information Search, Loading Speed, Downtime & Errors, Mobile Responsiveness, Visual Appearance, Information Layout, Design Consistency, Overall Satisfaction, and Useful Features. These categories are selected to provide a comprehensive overview of user interaction quality with the system, ranging from technical aspects such as speed and stability to subjective aspects such as satisfaction and ease of use. Through this approach, the study can identify strengths and weaknesses of the system that can be improved to enhance the overall user experience.

Tabel 1. Testing Categories

No.	Testing Categories
1	Usage Frequency
2	Navigation Ease
3	Information Search
4	Loading Speed
5	Downtime & Errors
6	Mobile Responsiveness
7	Visual Appearance
8	Information Layout
9	Design Consistency
10	Overall Satisfaction
11	Useful Features

In this study, each UX category is measured through a single question in the questionnaire, totaling 11 questions. Users are evaluated on Usage Frequency, Navigation Ease, and ease of Information Search. Technical aspects such as Loading Speed, Downtime & Errors, and Mobile Responsiveness are also assessed. Additionally, design elements include Visual Appearance, Information Layout, and Design Consistency. Overall Satisfaction and the usefulness of Useful Features are also measured to understand the overall UX quality.

Table 2. UX Testing Questions

Categorie	Questions
1	How often do you use the Universitas Terbuka website?
2	How easy is it for you to navigate the Universitas Terbuka website?
3	Can you quickly find the information you need?
4	How would you rate the loading speed of the Universitas Terbuka website?
5	Have you ever experienced downtime or errors while accessing the Universitas Terbuka website?
6	How responsive is this website on mobile devices?
7	How would you rate the visual appearance of the Universitas Terbuka website?
8	How well is the information layout structured on the Universitas Terbuka website?
9	How consistent are the design and visual theme across all pages of the Universitas Terbuka website?
10	How satisfied are you with your overall experience using the Universitas Terbuka website?
11	Which feature do you find most useful on the Universitas Terbuka website?

This study involved 15 respondents as representatives of Universitas Terbuka (UT) website users from various categories. According to the diagram, the majority of respondents were lecturers (46.7%), followed by administrative staff (26.7%). Meanwhile, students accounted for 13.3% of the total respondents, followed by IT staff and intern students with smaller percentages. This diversity of respondents provides a more comprehensive overview of user experience from different academic and administrative backgrounds in accessing the UT website.

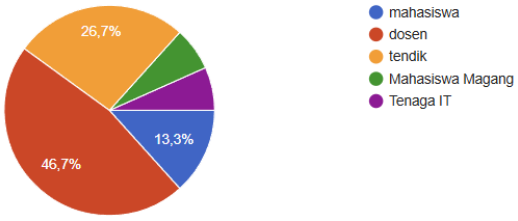

Figure 3. Respondents in this study

The survey results indicate that the majority of respondents had a positive experience with the Universitas Terbuka website. Loading speed (73.3%), mobile responsiveness (73.3%), and overall satisfaction (73.3%) were rated as very good. This suggests that the website has been optimized for fast access and a well-displayed interface on mobile devices. Additionally, navigation ease (53.3%) and information search (46.7%) were rated as fairly good but could still be improved. Meanwhile, the most useful feature according to respondents was the academic portal (46.7%), highlighting its importance to users. Overall, the survey results suggest that the Universitas Terbuka website performs well, but there is room for improvement in information layout (40%) and visual aspects (46.7%).

Table 3. Survey Responses

No	Category	Most Frequent Answer	Respondents
1	Usage Frequency	Every Day (46.7%)	7
2	Ease of Navigation	Very Easy (53.3%)	6
3	Information Search	Always (46.7%)	7
4	Loading Speed	Very Fast (73.3%)	11
5	Downtime & Errors	No (73.3%)	11
6	Mobile Responsiveness	Responsive (73.3%)	11
7	Visual Appearance	Very Attractive (46.7%)	7
8	Information Layout	Very Good (40%)	6
9	Design Consistency	Very Consistent (60%)	9
10	Overall Satisfaction	Very Satisfied (73.3%)	11
11	Most Useful Feature	Academic Portal (46.7%)	7

Based on the displayed graph, the majority of respondents are satisfied with their experience using the Universitas Terbuka website, particularly in terms of loading speed, mobile responsiveness, and ease of navigation. Most users also perceive the visual appearance and information layout as sufficiently appealing and consistent across all pages. However, although the survey results indicate high satisfaction,

there is still room for improvement to ensure an even more optimal user experience in the future.

B. User Experience (UX) Analysis of the Universitas Terbuka Website

Survey results indicate that user experience with the Universitas Terbuka website is generally very positive, particularly in terms of performance and responsiveness. Page loading speed received an excellent rating (73.3%), reflecting the website's optimization for fast and efficient access. Mobile responsiveness was also highly rated (73.3%), indicating that adaptive design has been well implemented, supporting accessibility for students who increasingly rely on mobile devices.

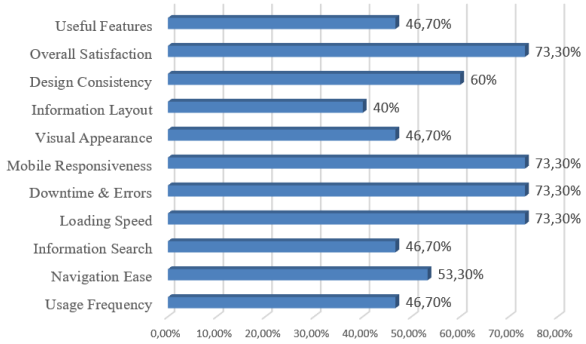

Figure 4. UX Testing Results Image

Navigation on the website received a fairly good rating (53.3%), but there is still room for improvement to speed up information retrieval. About 46.7% of respondents always found the information they needed, but the layout still needs enhancement, with a satisfaction level of 40%. Improvements in navigation structure and more intuitive information grouping can significantly enhance the user experience.

From a visual design perspective, the website was considered fairly attractive, with a satisfaction level of 46.7%, while design consistency reached 60%. A uniform design provides a cohesive experience, but some refinements in color harmony and a more modern layout can further enhance its visual appeal.

The most frequently used feature is the academic portal (46.7%), indicating that students heavily rely on digital academic services. Therefore, optimizing this feature in terms of accessibility and functionality will further enhance user satisfaction. Overall, 73.3% of respondents expressed high satisfaction with the Universitas Terbuka website.

The UX testing results indicate that the website meets good standards in terms of speed, compatibility, and design. However, there is still room for improvement in navigation, information retrieval, and layout. By optimizing the information structure and implementing a more modern design, the Universitas Terbuka website can further improve user experience and better support online learning.

C. Performa Testing using dengan Gtmetrix

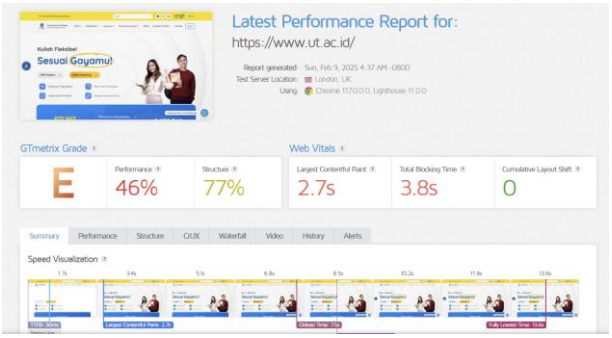

Figure 5. GTMetrix Performance Testing Results

In this study, the performance of the Universitas Terbuka website was tested using GTMetrix to evaluate technical aspects that influence the user experience (UX). This testing complements the UX survey conducted earlier, where users rated access speed, responsiveness, ease of navigation, and visual appeal. The results from GTMetrix provide an objective assessment of the website's performance, which is then analyzed in relation to user satisfaction measured through the UX survey.

The test results indicate that technical aspects can still be optimized to enhance UX. A performance score of 46% suggests that the website's speed and efficiency are not yet optimal, although still functional. The Largest Contentful Paint (LCP) was recorded at 2.7 seconds, meaning users may experience delays in loading key page elements. However, the Cumulative Layout Shift (CLS) value of 0 indicates that the website maintains visual stability, ensuring that elements do not shift unexpectedly and disrupt user interactions.

On the other hand, a Total Blocking Time (TBT) of 3.8 seconds highlights delays in processing interactive elements, which can impact navigation comfort and website responsiveness. This finding aligns with the UX survey results, where ease of navigation received a rating of 53.3% and information retrieval 46.7%, indicating that users still face challenges in quickly accessing information. Nevertheless, an improved structure score of 77% reflects progress in element management and design, which corresponds to the UX survey findings regarding satisfaction with visual appeal and design consistency.

Overall, while the Universitas Terbuka website provides a fairly good user experience, the test results suggest that further optimization is necessary, particularly in speeding up main element loading times and reducing Total Blocking Time to ensure smoother user interactions. By enhancing these technical aspects, the website's UX can be further improved, enabling users to access academic information more quickly and efficiently.

Table 4. Correlation Between GTMetrix Testing Results and UX Survey Findings

No	Categories UX	UX (%)	GTMetrix Indicator	GTMetrix Results
2	Ease of Navigation	53,3	LCP	2.7s
3	Information Search	46,7	TBT	3.8s

4	Loading Speed	73,3	Performance Score	46%
5	Downtime & Errors	73,3	TBT	3.8s
6	Mobile Responsiveness	73,3	CLS	0
8	Information Layout	40	Structure Score	77%
9	Design Consistency	60	Structure Score	77%

This table indicates that while the user experience (UX) of the Universitas Terbuka website is generally rated positively by users, the GTMetrix performance test reveals several technical aspects that need improvement, particularly in loading speed (46%) and a relatively high Total Blocking Time (3.8s). However, mobile responsiveness is rated very well, with a Cumulative Layout Shift of 0, meaning there are no disruptive layout shifts affecting the user experience. The design structure also received a high score (77%), supporting the well-rated design consistency by users. This suggests that while the website is visually stable, further technical optimizations are necessary to enhance overall user experience.

The UX issues on the Universitas Terbuka website can be analyzed more deeply by linking them to GTMetrix performance metrics for more effective improvements. For instance, user complaints about slow page loading can be measured using Largest Contentful Paint (LCP) and Time to Interactive (TTI), while layout shifts, such as sudden element movements, are related to Cumulative Layout Shift (CLS). If navigation feels sluggish or unresponsive on mobile devices, First Input Delay (FID) and Total Blocking Time (TBT) serve as key indicators. By connecting user feedback with these performance metrics, targeted improvements can be made, such as optimizing images to enhance LCP or refining layout stability to reduce CLS, ultimately improving the user experience of the Universitas Terbuka website.

V. CONCLUSIONS

A. Conclutions

The research findings indicate that user experience (UX) on the Universitas Terbuka website is influenced by various factors, including ease of navigation, access speed, clarity of information, and responsiveness across different devices. By combining survey questionnaires and web performance analysis, this study identifies that while the UT website provides fairly good services, there are still challenges in access speed and information structure that require improvement. For future research, implementing machine learning for personalized interfaces and web performance optimization could be a strategic step toward continuously enhancing user experience.

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