Evaluating User Experience of the Workout Tracker Feature in the FIT HUB Mobile Fitness Application Using the User Experience Questionnaire and Usability Testing

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Abstract: *The rapid development of digital fitness applications in Indonesia has been driven by increasing public awareness of healthy lifestyles. FIT HUB is a digital fitness application that provides a Workout Tracker feature to help users record and monitor their exercise activities. However, user reviews indicate that several issues remain, particularly related to feature clarity, navigation, and system stability. This study aims to evaluate the user experience of the FIT HUB application and identify areas for improvement to enhance user satisfaction and sustained application usage. This study employs a mixed-method approach by combining the User Experience Questionnaire (UEQ) and usability testing methods. Data were collected through the distribution of UEQ questionnaires to application users and the implementation of usability testing to identify usability issues encountered during task completion. The analysis results were used as a reference for formulating interface design improvement recommendations. The results of the UEQ evaluation indicate that the FIT HUB application demonstrates strong performance in terms of attractiveness and stimulation. However, aspects related to efficiency and novelty still require improvement. Furthermore, usability testing revealed several obstacles, particularly in accessing video tutorial features and storing exercise data. Based on these findings, an improved interface prototype was designed with a focus on enhancing feature clarity, navigation usability, and motivational elements. This study concludes that the combination of UEQ and usability testing methods is effective in identifying user experience issues and generating relevant interface design improvement recommendations for digital fitness applications*

Keywords: *Digital Fitness Application; Usability Testing; User Experience Questionnaire; User Interface; User Experience*

1. Introduction

The development of digital technology has transformed how people engage in physical activity and access fitness services. In the post-pandemic period, public participation in exercise activities has increased, reflecting a growing awareness of the importance of physical fitness. This trend has encouraged the adoption of fitness applications to support workout management and physical activity routines, making user experience a critical aspect to be evaluated in ensuring the effectiveness of these applications [1].

Physical fitness plays a crucial role in maintaining individuals ability to perform daily activities effectively and sustain overall well-being. Regular physical activity is widely recognized as an essential factor in improving physical health, reducing body fat, and increasing muscle mass. These benefits position exercise as a key component of long-term health maintenance and quality of life. Consequently, individuals with specific fitness goals tend to prefer structured exercise programs, as they provide systematic guidance, appropriate intensity levels, and measurable outcomes [2].

Along with the growing awareness of healthy lifestyles, the fitness industry has continued to develop with the support of technological innovation. Fitness centers increasingly integrate

digital platforms to complement offline services, enabling users to manage training schedules and monitor progress more efficiently. In the post-pandemic period, increased participation in physical activity has been accompanied by greater utilization of digital fitness applications as tools to support exercise routines. In Indonesia, this shift highlights the role of digital platforms in encouraging consistent physical activity and supporting lifestyle changes toward improved fitness [1].

FIT HUB is one of the fitness center providers in Indonesia that has actively adopted digital technology through a mobile application to enhance its service delivery. Operating more than 80 branches across 25 cities, FIT HUB offers various fitness programs, group classes, and personal training services. The FIT HUB mobile application is designed to facilitate access to fitness-related services, including class reservations, workout monitoring through the Workout Tracker feature, membership management, and personal training sessions. The application aims to support users in organizing fitness activities efficiently while sustaining engagement within the fitness ecosystem [3].

Despite the availability of comprehensive features, initial observations based on user reviews indicate that the FIT HUB application still receives negative feedback and low ratings. Common complaints reported by users include unclear feature descriptions, navigation difficulties, limited accessibility of video tutorial content, and issues related to exercise data storage. These problems suggest that the application has not fully met user expectations in terms of usability and overall experience. If not addressed properly, such issues may negatively affect user satisfaction and reduce continued use of the application [4].

User experience and usability are widely recognized as critical factors influencing the success of digital applications. User experience encompasses users' perceptions, emotions, and responses during interaction with a system, while usability focuses on the effectiveness, efficiency, and satisfaction with which users achieve their goals. Evaluating these aspects is essential to ensure that digital applications function not only as intended but also align with user needs and expectations. Poor usability and negative experiences may lead users to abandon an application despite its functional capabilities [5].

Various evaluation methods have been applied to assess user experience and usability in digital applications. The User Experience Questionnaire (UEQ) is a widely used quantitative instrument that enables rapid and reliable measurement of user experience by capturing both pragmatic and hedonic dimensions. UEQ has been applied across multiple digital domains due to its simplicity and ability to provide comprehensive insights into user perceptions. However, quantitative measurements alone may not fully capture specific usability issues encountered during system interaction [6].

To complement quantitative evaluation, usability testing is commonly employed to identify concrete usability problems through direct observation of users performing tasks. Usability testing allows researchers to analyze user interaction behavior, identify barriers to task completion, and collect feedback on difficulties experienced during system use. Previous studies have demonstrated that usability testing provides valuable qualitative insights that support targeted improvements in interface design and system functionality [7].

Therefore, a comprehensive evaluation approach that combines quantitative and qualitative methods is necessary to obtain a holistic understanding of user experience and usability. This study aims to evaluate the user experience of the FIT HUB mobile application by integrating the User Experience Questionnaire (UEQ) and usability testing methods. By combining these approaches, this research seeks to identify user experience issues, uncover usability problems, and formulate interface design improvement recommendations that enhance user satisfaction, motivation, and sustained use of the FIT HUB application.

2. Research Method

2.1. Research Design

This study employs a mixed-method research design by integrating quantitative and qualitative approaches to evaluate the user experience of the FIT HUB application, particularly the Workout Tracker feature. A mixed-method approach enables researchers to obtain both measurable user experience scores and in-depth insights into user behavior and interaction problems, thereby producing a more comprehensive evaluation [8].

The quantitative method was conducted using the User Experience Questionnaire (UEQ), which is designed to measure users' perceptions across multiple experiential dimensions using standardized semantic differential scales [6]. Meanwhile, the qualitative approach was implemented through usability testing to explore non-numerical data such as user difficulties, errors, and expectations during task execution. User Experience Questionnaire (UEQ) and usability testing are employed in a complementary manner to support user experience evaluation, with UEQ capturing overall user perceptions and usability testing providing further insights into specific interaction-related issues [4].

2.2. Data Collection Procedures (Population and Sample)

The population of this study consists of registered users of the FIT HUB application who have experience using the Workout Tracker feature. Quantitative data were collected using an online UEQ questionnaire distributed via Google Forms. Referring to the UEQ handbook [9], a minimum of 20 respondents is required to obtain statistically stable results In this study, the questionnaire was distributed to 100 respondents using purposive sampling to ensure that all participants met the predefined criteria as FIT HUB users.

The UEQ questionnaire employed a semantic differential scale ranging from 1 to 7 and was presented in Indonesian to improve clarity and reduce misinterpretation [10]. The translation process was carefully conducted and reviewed by a bilingual academic familiar with usability research to ensure semantic equivalence and maintain instrument validity. In addition to UEQ items, validation questions were included to confirm that respondents were actual users of the FIT HUB application, along with demographic questions to analyze respondent distribution.

Qualitative data were collected through usability testing to identify usability problems and interaction issues within the Workout Tracker feature. Seven participants were recruited, following Nielsen's recommendation that five to seven users are sufficient to uncover the majority of usability problems in an interface [11]. Usability testing was conducted using the concurrent probing technique, where participants completed predefined task scenarios while the researcher observed their actions and asked probing questions when necessary to gain deeper insights [12].

2.3. Data Analysis

Quantitative data from the UEQ questionnaire were analyzed using the official UEQ analysis tool based on Microsoft Excel, which generates mean values and benchmark comparisons for each UEQ dimension [5]. These results were used to assess the overall user experience quality of the Workout Tracker feature.

Qualitative data from usability testing and post-test interviews were analyzed by coding user responses, identifying recurring usability issues, and categorizing findings based on task success, efficiency, and user feedback. Task scenarios were used to evaluate effectiveness and efficiency, as task-based testing is a widely adopted approach for usability evaluation [13]. Based on the combined analysis results, a high-fidelity prototype was developed using Figma to propose design improvements that address the identified usability issues. High-fidelity prototyping was chosen to closely represent the final product in terms of visual and interaction design, enabling more realistic evaluation and feedback [14].

3. Results and Discussion

3.1. Evaluation Results Using the User Experience Questionnaire (UEQ)

The evaluation of user experience in the FIT HUB application using the User Experience Questionnaire (UEQ) involved a total of 126 respondents who met the research criteria. Based on gender, the respondents consisted of 66 male and 60 female participants. In terms of age distribution, the majority of respondents were aged 20–29 years, totaling 98 respondents, followed by 21 respondents aged 30–39 years, 5 respondent aged 40–49 years, and 2 respondent aged 50–59 years.

Regarding domicile, most respondents were from the Greater Jakarta (Jabodetabek) area, with a total of 105 respondents. In addition, 11 respondents resided in other regions on Java Island outside Jabodetabek, while10 respondents were domiciled outside Java Island.

The overall results of the User Experience Questionnaire (UEQ) evaluation of the FIT HUB application are presented in Figure 1 and Figure 2. The mean values for each UEQ scale are shown in Figure 1, namely Attractiveness with a score of 1.687, Perspicuity with a score of 1.569, Efficiency with a score of 1.450, Dependability with a score of 1.470, Stimulation with a score of 1.778, and Novelty with a score of 1.417.
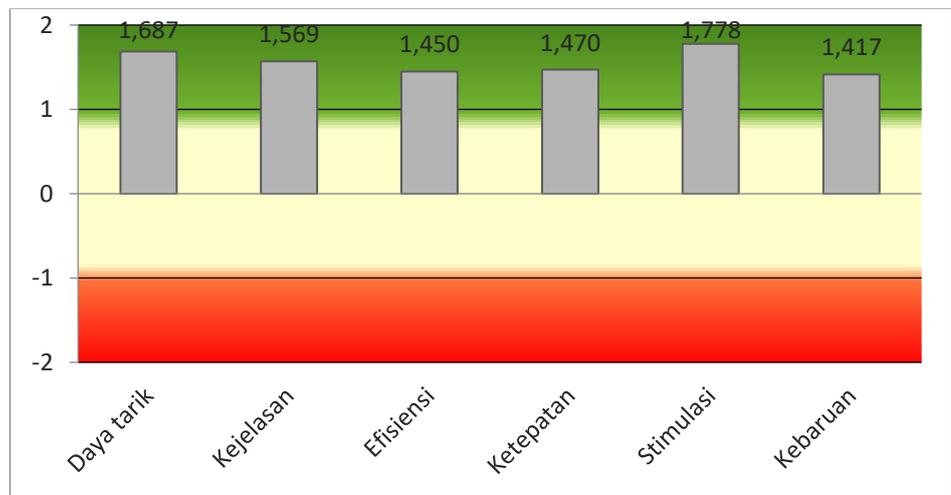

Figure 1. Average UEQ scale values of the FIT HUB application design
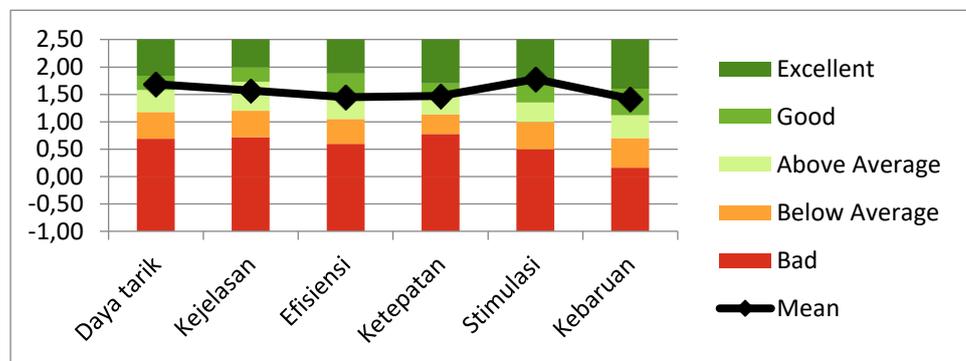

Figure 2. UEQ benchmark diagram on the FIT HUB application design

Figure 1 indicates that all UEQ scales of the FIT HUB application fall within the positive user experience category, in accordance with the UEQ guideline which states that a value is considered positive if it is above 0.8. This finding indicates that users generally provide favorable evaluations of their experience when using the FIT HUB application.

Figure 2 presents the UEQ benchmark results for the FIT HUB application. Based on the benchmark diagram, all UEQ scales are classified in the Good category. The UEQ benchmark is based on a dataset consisting of more than 400 product evaluations conducted

using the UEQ method, allowing the results to be objectively compared with other evaluated applications or systems. A value is categorized as Good if it falls within the top 25% of the benchmark results. Therefore, these results indicate that the overall quality of user experience of the FIT HUB application is considered good. However, the benchmark results also show that none of the UEQ scales reached the Excellent category, which represents the top 10% of the benchmark data. This finding indicates that although the overall user experience is classified as good, there remains substantial opportunity to enhance the system in order to reach the highest benchmark level of user experience quality.

This indicates that although the FIT HUB application has delivered a positive and high-quality user experience, there is still room for improvement in several aspects of user experience. Therefore, to further identify areas that should be prioritized for improvement in order to enhance the overall user experience, an additional evaluation was conducted through usability testing.

3.2. Usability Testing Results
3.2.1. Observation and Task Completion Results
Based on the usability testing conducted with seven respondents, data were obtained regarding task completion time, success rate, and observational notes for each task scenario. In general, most respondents were able to complete the assigned tasks successfully and within a relatively short time. The usability testing participants were selected from the 126 respondents who had previously completed the UEQ questionnaire. Participants were filtered based on two criteria: having used the Workout Tracker feature at least once and being willing to participate in direct usability testing.

Following Nielsen's recommendation that five to eight users are sufficient to identify most usability problems, seven participants were considered adequate for this study. The participants consisted of one male and six female users aged between 20 and 33 years, all of whom had prior experience using the Workout Tracker feature. The summary of the average observation results and task completion is presented in Table 1.

Table 1. Average observation results and task completion

No	Task Scenario	Average Time (seconds)	Success Rate (%)	Observation Notes
1	Access the Workout Tracker feature	8.1	100%	Most participants were able to find the feature easily without assistance.
2	Add a new workout session	5.6	100%	All participants immediately tapped the add workout icon as the button was clearly visible.
3	Select a leg workout exercise	20.0	71%	Several participants encountered errors and stated that the exercise names were too many or unfamiliar.
4	Set workout parameters (repetitions & weight)	12.9	86%	Some participants experienced minor errors; however, the steps were generally easy to understand.
5	Start the workout session	4.0	100%	All participants were able to start the workout quickly without confusion.

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No	Task Scenario	Average Time (seconds)	Success Rate (%)	Observation Notes
6	View a workout tutorial video	25.6	43%	Most participants were confused because they did not realize that the exercise name was clickable.
7	Complete the workout and save progress	8.9	100%	All participants successfully saved their workout results.
8	Review the displayed workout results	8.3	100%	The results display was considered clear and informative.
9	Open the Progress menu	5.0	100%	The menu was easy to find as it is displayed in the main navigation.

The tasks such as accessing the Workout Tracker feature, adding a new workout session, starting a workout session, saving workout results, and opening the Progress menu were successfully completed by all respondents with a 100% success rate and relatively short completion times. These results indicate that the core workflow of the Workout Tracker feature is intuitive and can be efficiently executed by users.

Two task scenarios were identified as problematic. The task of selecting a workout exercise recorded an average completion time of 20.0 seconds with a success rate of 71%, while the task of finding and opening a workout tutorial video showed the longest average completion time of 25.6 seconds and the lowest success rate at 43%. One participant stated, "I didn't realize the exercise name was clickable because there was no visual indicator." Another participant mentioned, "I expected the tutorial video to open automatically after selecting the exercise." Observational findings revealed that several respondents experienced system errors and confusion due to an excessive number of workout exercise names, unfamiliar terminology, and the lack of clear visual cues indicating that workout names or icons were interactive.

These findings highlight usability issues related to the clarity and visibility of interactive elements. Therefore, improvements are required, particularly in providing clearer click indicators and video icons, as well as simplifying or enhancing the workout exercise list to improve user understanding, efficiency, and overall task success.

3.3. Usability Testing Analysis Based on Nielsen's Five Usability Aspects
3.3.1. Learnability
All respondents were able to understand how to use the application quickly, particularly in finding the main features such as the Workout Tracker and adding workout sessions. This indicates that the application is easy to learn. However, several respondents required additional time to recognize interactive elements related to the workout tutorial videos.

3.3.2. Efficiency
The average task completion time for most scenarios was below 15 seconds, indicating good efficiency. Users were able to complete tasks quickly, although minor system errors slightly slowed down the process in certain tasks, such as setting workout parameters.

3.3.3. Memorability
Since all respondents had previously used the Workout Tracker feature, they were able to recall the application flow well and did not experience confusion when repeating the same tasks. This suggests that the navigation structure of the application is consistent and easy to remember.

3.3.4. Errors

Errors were most frequently encountered when accessing workout tutorial videos due to the lack of clear click indicators. In addition, several respondents experienced minor bugs when setting workout weights. These findings indicate the need to improve the affordance of interactive elements and enhance system stability.

3.3.5. Satisfaction

The average user satisfaction score was 4 out of 5. Most respondents felt that the application was easy to use and visually appealing. Nevertheless, respondents suggested additional features such as personalized progress tracking, calorie burn information, and visual motivational elements to further enhance user satisfaction.

Based on the usability testing results, it can be concluded that the FIT HUB application demonstrates good usability performance in terms of learnability, efficiency, and memorability. All respondents were able to complete the main tasks quickly and without significant difficulty, particularly in navigating the Workout Tracker feature and saving workout results.

However, several usability issues were identified in the errors and satisfaction aspects, particularly related to the clarity of interactive elements in the workout tutorial feature and system stability when adjusting workout parameters. Despite these issues, the overall user satisfaction level remained high, with most respondents assigning a score of 4 out of 5. These findings serve as an important basis for the prototype design and improvement stage, focusing on enhancing interaction clarity, reducing errors, and improving overall user satisfaction.

3.4. General Findings and Design Improvement

3.4.1. General Findings

Based on the evaluation results using the User Experience Questionnaire (UEQ) and usability testing, several key findings were identified that reflect the quality of user experience in the FIT HUB application, particularly in the Workout Tracker feature. These findings highlight both the strengths of the existing system and the aspects that require further improvement.

The UEQ results indicate that all user experience dimensions fall within the positive category, with mean values exceeding the threshold of 0.8. The Stimulation and Attractiveness dimensions achieved relatively higher scores compared to other dimensions, indicating that the FIT HUB application is perceived as engaging, enjoyable, and motivating for users during workout activities. According to the UEQ benchmark results, all dimensions are classified as Good, meaning that the overall user experience quality of FIT HUB is within the top 25% compared to other products in the UEQ benchmark dataset.

However, none of the dimensions reached the Excellent category, suggesting that there is still room for improvement. The Efficiency and Perspicuity dimensions obtained comparatively lower scores than the emotional dimensions, indicating that some users still experience difficulties in understanding certain interaction flows or require additional effort to achieve their goals.

These findings are reinforced by the results of the usability testing, where most respondents were able to complete the main tasks with high success rates and relatively short completion times. This indicates that the core navigation structure and primary task flows of the application are generally well designed. Nevertheless, several usability issues were identified, particularly in the exercise selection process and access to tutorial videos.

Most respondents did not realize that the exercise names were clickable to open tutorial videos, resulting in a significantly lower success rate for this scenario. In addition, minor technical issues were reported, such as bugs when adjusting workout parameters and the small size and low visibility of the main action button.

Overall, user satisfaction remains high, with an average satisfaction score of 4 out of 5. However, the evaluation results indicate that improvements are still needed in terms of interaction clarity, interface visibility, and system reliability to further enhance the overall user experience. These findings serve as the foundation for the design improvement proposals discussed in the following subsection.

3.5. Design Improvement
3.5.1. Addition of Video Icons or Buttons in the Tutorial Feature

Based on the usability testing results, most respondents experienced difficulties accessing the tutorial videos because they did not realize that the exercise names were interactive and clickable. This finding indicates issues related to learnability and error prevention, as well as the perspicuity dimension in the UEQ results.

To address this issue, a play icon or supporting visual label was added to clearly indicate the interactivity of the exercise items. This visual cue aims to help users recognize the availability of video tutorials more easily, in accordance with the visibility principle in interaction design, which emphasizes that system functions should be clearly perceivable by users. In addition, this improvement aligns with the principles of Offer Informative Feedback and Prevent Errors [15], which state that interactive elements should provide clear visual indications to reduce user errors.

From a visual design perspective, the principle of contrast [16] was applied to ensure that the video icon stands out from regular text elements. The comparison between the interface before and after the improvement is illustrated in Figure 3.
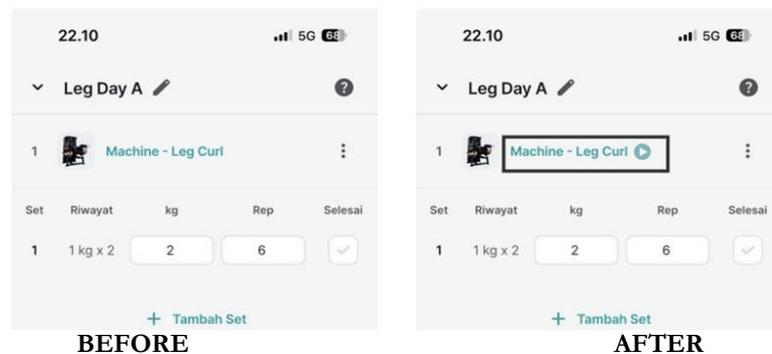

Figure 3. Improved Video Tutorial Access Interface Design

3.6. Optimization of the "End" Button Display

The "End" button functions properly in saving workout progress; however, usability testing indicates that several respondents perceive the button as too small and insufficiently visible. This condition has the potential to reduce interaction efficiency during workout sessions.

The interface was optimized by increasing the button size and adjusting its placement to improve accessibility. This modification aims to enhance efficiency and user satisfaction and is consistent with the principles of Strive for Consistency and Scale [15]; [16] which emphasize appropriate element size and placement based on their level of importance.

The button was redesigned as a primary action button with a more prominent size and contrasting color to strengthen visual hierarchy, in accordance with the Visual Hierarchy principle [16] on the workout screen, key information such as exercise name, set count, and stopwatch was repositioned to the top of the interface to provide clear real-time context. In addition, the "End" button was renamed to "End Workout," enlarged, and visually emphasized to improve user focus. The proposed design is presented in Figure 3.
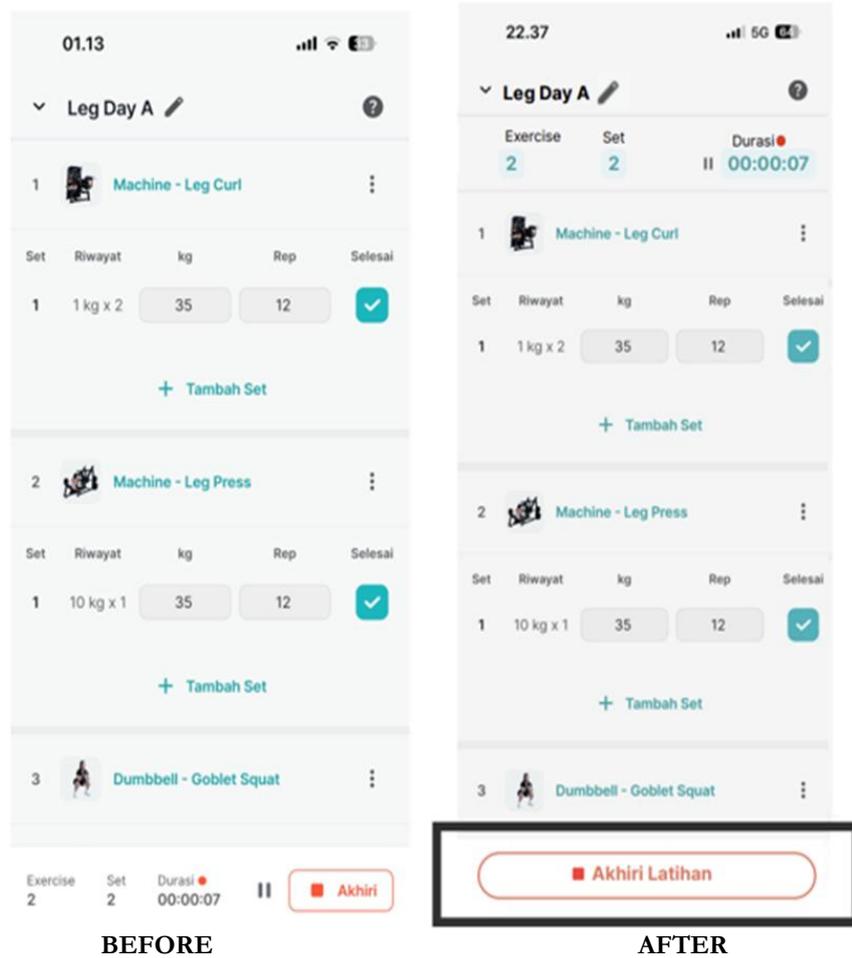
Figure 4. Improved "End Workout" Button Interface Design

3.7. Addition of Workout Progress Visualization and Workout Composition

The usability testing results indicated that the previous workout summary interface was perceived as too simplistic and did not clearly communicate users workout progress. To address this issue, the proposed design introduces visualizations for workout progress and workout composition.

This enhancement is based on the principle of Design Dialogs to Yield Closure [15] which emphasizes the importance of providing meaningful feedback after task completion. In this context, progress charts serve as *closure feedback* by visually representing users' achievements. In addition, the principles of balance and gestalt [16] were applied to maintain visual clarity and layout harmony.

The proposed design includes a line chart to display weekly workout progress and a pie chart to illustrate workout composition based on muscle groups, such as legs, chest, shoulders, and arms. This visualization is expected to improve users' understanding of their workout progress, enhance motivation, and strengthen the stimulation and satisfaction aspects of user experience. The prototype is presented in Figure 5.
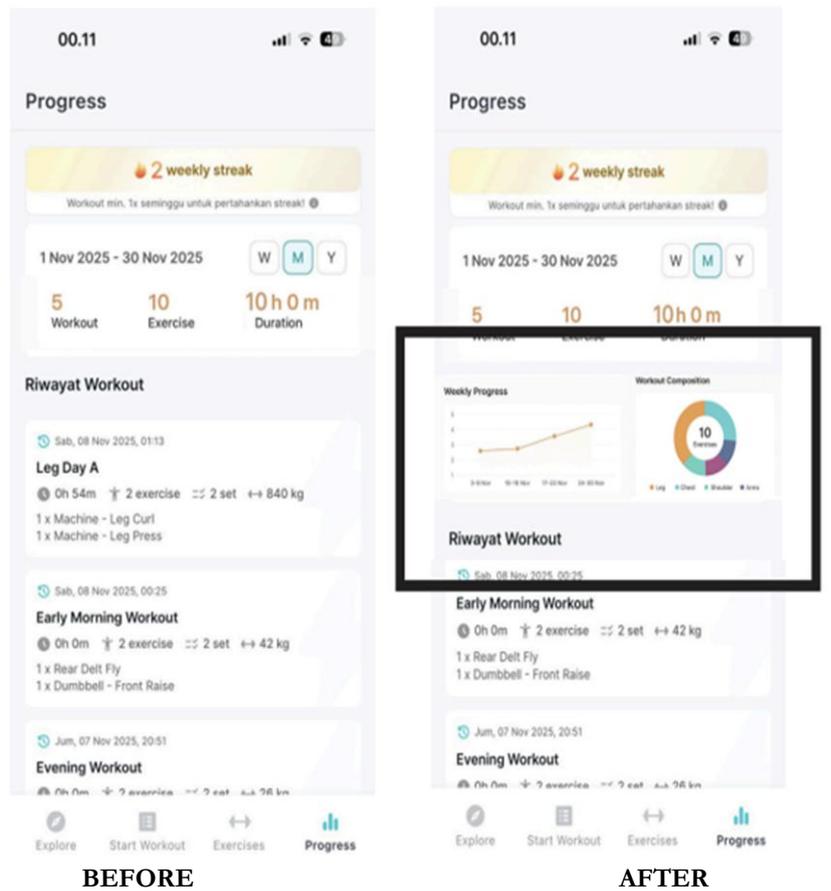
Figure 5. Improved Workout Progress and Workout Composition Visualization Interface

3.8. Development of a Workout Reminder Feature

The workout reminder feature was developed to help users maintain consistency in their exercise routines by providing flexible scheduling options. This feature was designed based on user recommendations obtained from the UEQ questionnaire.

The implementation of the reminder feature follows the principle of Keep Users in Control [15] which emphasizes granting users full control over their interaction preferences. Additionally, the principles of consistency and balance [15]; [16] were applied to ensure visual alignment with other interface elements.

The feature includes an "Set Workout Reminder" button on the *Start Workout* page, allowing users to customize the time, day, and frequency of reminders. The interface is designed to be simple and intuitive, using a bell icon to represent the reminder function. The proposed prototype is shown in Figure 6.
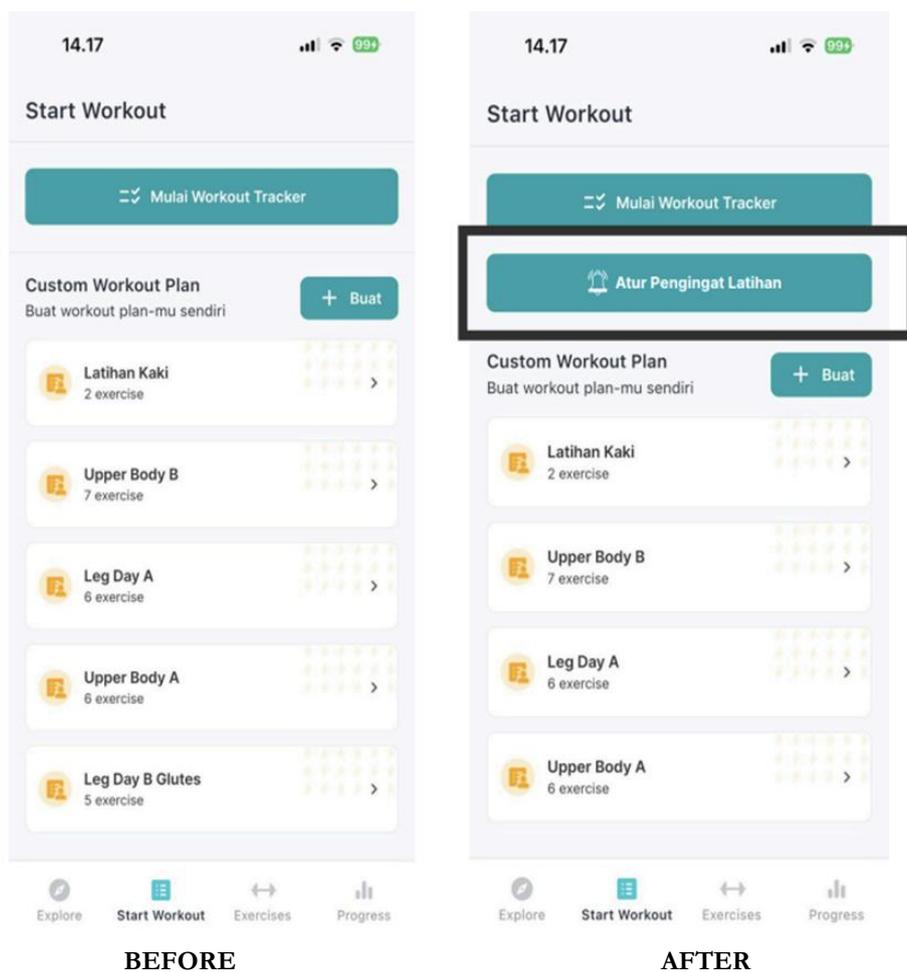
BEFORE   **AFTER**

Figure 6. Improved Workout Reminder Interface Design

3.9. Automatic Data Saving and System Error Detection

To improve system reliability and prevent data loss, an automatic data-saving (*autosave*) mechanism was implemented, which saves workout data after each completed set. This improvement was based on usability testing results indicating system errors that caused workout data not to be saved properly.

If a connection issue occurs or the application closes unexpectedly, the system displays a confirmation message allowing users to resume their workout from the last saved data. This approach aligns with the principles of Prevent Errors and Offer Informative Feedback [15] From a visual standpoint, notifications are designed as concise and high-contrast pop-ups following the gestalt principle [16]. The prototype illustration is presented in Figure 7.
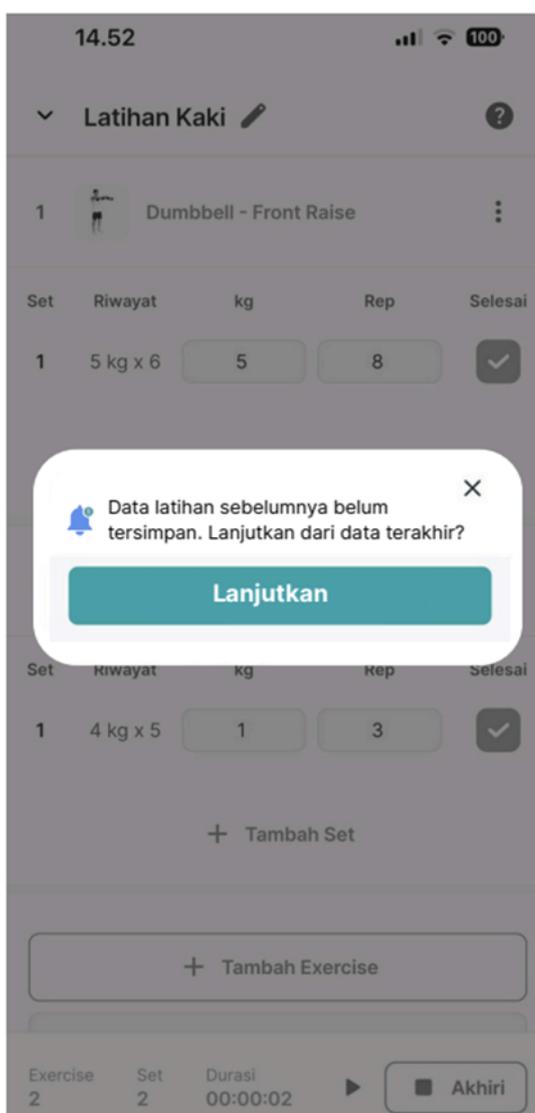
Figure 7. Improved Autosave and Error Detection Notification Interface

3.10. Addition of a Weekly Challenge Feature

The *Weekly Challenge* feature was designed to enhance user motivation and engagement in maintaining regular workout routines. This feature is based on the principle of Design Dialogs to Yield Closure [15] providing users with a sense of achievement through weekly updated challenges.

This feature is directly related to the stimulation dimension of UEQ, which reflects novelty and motivation in user experience. Each week, the system presents a new workout challenge, such as a target number of sessions or total workout duration, accompanied by a success notification once the challenge is completed.

The development of this feature is supported by the high score obtained in the Stimulation dimension, which reflects users' interest in engaging and motivational elements. Several participants also expressed the need for additional goal-oriented features during usability testing. Although the stimulation dimension already achieved high UEQ scores, the addition of this feature remains relevant to sustaining long-term motivation and reinforcing the novelty aspect. From a visual perspective, the visual hierarchy principle [16] was applied to ensure that the feature is easily noticeable without disrupting the main navigation flow. The proposed designs are illustrated in Figure 8 and Figure 9.
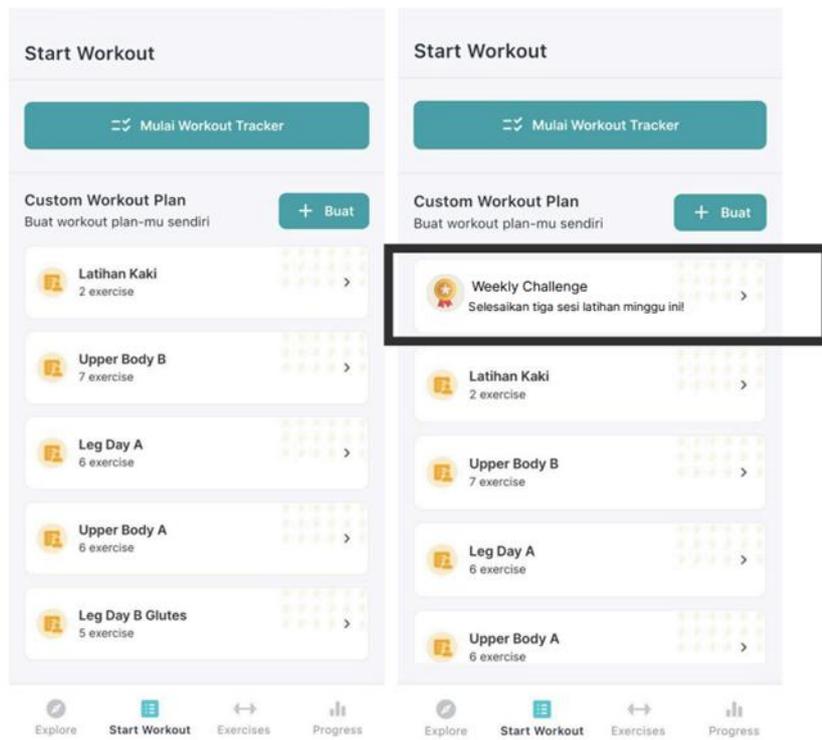
Figure 8. Improved Weekly Challenge Interface Design

Figure 9. Improved Weekly Challenge Completion Notification Interface

4. Conclusions & Suggestion

This study aimed to evaluate and improve the user experience of the FIT HUB application, particularly the Workout Tracker feature, using the User Experience Questionnaire (UEQ) and usability testing. The evaluation provides insights into users' emotional and functional perceptions and identifies key usability issues that inform design improvement recommendations.

The UEQ results indicate a positive user experience, with Stimulation (1.78) and Attractiveness (1.69) achieving the highest scores. Perspicuity (1.57), Efficiency (1.45), and Dependability (1.47) were rated above average, while Novelty (1.42) received the lowest score, suggesting the need for further innovation. Although all dimensions were classified in the Good category based on the UEQ benchmark, none reached the Excellent level, indicating that there is still considerable opportunity to further enhance the overall user experience quality.

Usability testing demonstrated high task success rates and efficient completion times. However, several interface issues were identified, particularly related to interaction clarity, visibility of clickable elements, and minor system reliability problems. These findings confirm the importance of combining quantitative and qualitative evaluation methods to obtain a comprehensive understanding of user experience issues.

Overall, the findings highlight the importance of involving end-users in the evaluation process. The proposed design improvements are expected to enhance usability, motivation, and system reliability. Future research is recommended to conduct a follow-up usability evaluation of the proposed high-fidelity prototype to measure the effectiveness of the implemented improvements and compare the results with the current system. In addition, involving a larger and more diverse group of participants may provide broader insights into user interaction patterns.

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