

Evaluation of User Experience in Kiffah Interactive Learning Media Using the User Experience Questionnaire – Short (UEQ-S)

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Abstract. Interactive learning media represents one of the most promising innovations for increasing student engagement in the learning process. Kiffah is an interactive learning medium in the form of a digital comic developed to help grade X students understand Fiqh, particularly the Muamalah chapter. Despite the growing adoption of interactive media in Islamic religious education, empirical UX evaluations of such applications using standardized instruments remain scarce in the literature. This study addresses that gap by evaluating the user experience (UX) of the Kiffah interactive learning media using the User Experience Questionnaire Short (UEQ-S), offering novel evidence on how a domain-specific educational comic application performs against international UX benchmarks. Thirty-five grade X Madrasah Aliyah students participated as respondents. Data were collected through media trials followed by UEQ-S administration, measuring Pragmatic Quality and Hedonic Quality dimensions. Results show that Kiffah obtained a score of 1.650 in Pragmatic Quality (Good), 1.571 in Hedonic Quality (Good), and 1.611 overall (Excellent), placing it among the top 10% of products in the UEQ benchmark dataset. These findings confirm that Kiffah delivers a positive and engaging user experience at the prototype stage. The study contributes practical design insights for developers of Islamic educational digital media and recommends further evaluation with larger and more diverse samples.

Keywords. user experience, interactive learning media, UEQ-S

INTRODUCTION

The development of digital technology has brought significant transformations to the education sector, particularly in the delivery methods of learning materials. Interactive learning media presents a solution to create a more meaningful learning environment. The use of this media aims to stimulate interest, motivation, and have a positive psychological impact on students' understanding of the subject matter (Jusirwan et al., 2024). Students' positive response to interactive media, such as the inclusion of games or quizzes, has been shown to make the learning process much more enjoyable (Nurul Hikmah & Azis, 2024). To address this need, the Kiffah application was developed, an interactive learning medium specifically designed to help students understand the Fiqh material in the chapter on Muamalah.

One interactive media approach implemented in the Kiffah application is the use of comic-style visual elements. Educational comics are considered effective because they present simple visual narratives, making them easy to understand and enjoyable for all ages (Purwaristi & Wahyudi, 2024). The integration of images, narrative, and animation in educational comics can increase student enthusiasm and facilitate the understanding of complex information (Siregar & Siregar, 2021). The application of this visual approach has proven to be relevant for Fiqh material, as evidenced by Zulhiyah and Ramdoniati (2022), where the use of comic media succeeded in significantly increasing students' interest in learning

from the "good" category (82.9%) to "very good" (91%), proving the effectiveness of the visual narrative approach in Islamic religious learning.

However, the success of the Kiffah app depends not only on its content but also on how it understands its users' needs to achieve user satisfaction (Amajida et al., 2025). The comfort aspect of interacting with a system is a key determinant of software quality, known as User Experience (UX) (Savitri & Ratnasari, 2023). UX evaluation is crucial for measuring the extent to which an app is accepted and effectively meets user expectations (Fariha et al., 2024). This is because UX encompasses not only the interface but also the user's emotions, psychology, and context when interacting with the system (Putra & Al Azam, 2023).

To measure the quality of the user experience in the Kiffah app, this study used the User Experience Questionnaire–Short (UEQ-S). The short version was selected because it is more time-efficient and helps minimize respondent fatigue during questionnaire completion, thereby maintaining the quality of the responses (Schrepp, 2023). The UEQ-S consists of eight items that assess two main dimensions of user experience: Pragmatic Quality and Hedonic Quality. This instrument provides a concise yet comprehensive evaluation of both the functional and emotional aspects of an application, making it suitable for assessing user experience without placing excessive burden on respondents (Nurlifa et al., 2023).

As a newly developed educational application, Kiffah has not yet been systematically evaluated using standardized user experience (UX) assessment instruments. Therefore, this study aims to evaluate the user experience of the Kiffah interactive learning media using the User Experience Questionnaire–Short (UEQ-S). The novelty of this study lies in the application of the UEQ-S, an internationally recognized UX evaluation instrument, to a digital comic-based learning medium for the Fiqh subject, an area that has received limited attention in the literature on user experience in educational technology. This study is expected to contribute by: (1) providing empirical evidence on the user experience quality of the Kiffah application, which may serve as a reference for developers of religion-based digital learning media, and (2) offering evidence-based recommendations for improving the application's interactive design to better support the effectiveness of Fiqh learning.

METHODS

1. Research Design

This study adopts a descriptive quantitative approach to evaluate the user experience of the Kiffah interactive learning media prototype. The evaluation focuses on users' perceptions of the application's pragmatic quality and hedonic quality using the User Experience Questionnaire–Short (UEQ-S). This approach was selected to provide an objective assessment of user experience based on quantitative data collected from respondents after interacting with the prototype. The evaluated prototype represents an early stage of the application's development. The final version is planned to be released as a standalone Android application (.apk) developed using the Unity game engine and the C# programming language.

2. Research Subject and Samples

The participants in this study were Grade 10 students enrolled in a Madrasah Aliyah who were studying the Muamalah topic in the Fiqh subject. Purposive sampling was employed based on the following inclusion criteria: (1) students who were actively studying the Muamalah topic, and (2) students with adequate access to digital devices and sufficient digital literacy. Based on these criteria, a total of 35 students participated in the study. This sample size exceeds the recommended minimum for quantitative user experience evaluation, as previous studies suggest that a sample of more than 20–30 respondents is generally sufficient to obtain stable and reliable UEQ results (Schrepp, 2023).

3. Research Instruments

The primary instrument used in this study was the User Experience Questionnaire–Short (UEQ-S), a shortened version of the UEQ developed by Schrepp, Hinderks, and Thomaschewski (2017). The UEQ-S was selected based on its efficiency in measuring user perceptions without compromising the validity of the measurement results (Schrepp et al., 2017). This instrument consists of eight items using bipolar adjectives on a seven-point Likert scale, ranging from -3 (very negative) to +3 (very positive). The evaluation was conducted on two main dimensions of user experience:

- a. Pragmatic Quality: Focuses on aspects of functionality and usability, including perspicacity, efficiency, and dependability.
- b. Hedonic Quality: Focuses on the emotional and psychological aspects of users, including stimulation and novelty.

The indicator grid for the UEQ-S instrument used in this study is adapted from the official Indonesian version of the UEQ, presented in Table 1 below:

Table 1 UEQ-S Indicator Grid

No	Statement Item (Bipolar)	Dimensions	Measured Indicator
1	Hinder – Support	Pragmatic Quality	The effectiveness of the application in assisting the user with tasks
2	Complicated – Easy		The level of ease of application operation
3	Inefficient – Efficient		The speed and accuracy of achieving learning objectives
4	Confusing – Clear		The clarity of navigation and information structure
5	Boring – Exciting	Hedonic Quality	Visual appeal and entertainment elements
6	Uninteresting – Interesting		The general impression of the application's aesthetics
7	Conventional – Leading		The level of innovation and novelty of the design
8	Average – Superior		The overall perception of quality compared to other products

4. Data Collections

The data collection procedure in this study was carried out systematically through three main stages:

- a. Preparation Stage: Researchers conducted internal testing of the Kiffah application prototype to ensure all interactivity functions worked properly before distributing it to participants.
- b. Implementation Stage: Participants (students) were given access to the application and given approximately 30 minutes to explore all features independently. This was intended to provide students with a comprehensive user experience (first-hand experience).
- c. Evaluation Stage: Immediately after the session ended, students were asked to honestly complete the UEQ-S questionnaire based on their perceptions. The collected data was then compiled into a digital format for analysis.

5. Data Analysis Technique

The data obtained were analyzed descriptively quantitatively to describe students' perceptions of the Kiffah application prototype. The questionnaire results were analyzed automatically using the UEQ Data Analysis Tool to obtain average scores for the Pragmatic Quality and Hedonic Quality dimensions.

Pragmatic Quality emphasizes the functionality and ease of use of the media, while Hedonic Quality evaluates the innovation and emotional appeal of the product. The scores obtained were then interpreted into positive, neutral, or negative categories according to the UEQ-S assessment standards. Additionally, an internal reliability test was conducted using Cronbach's Alpha to assess the consistency of the instrument. The formula used is as follows:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum \sigma_i^2}{\sigma_t^2} \right) \quad (1)$$

Description:

- α = Cronbach's Alpha value
- k = number of statement items
- σ_i^2 = variance of each item
- σ_t^2 = variance of total score

The instrument is considered reliable if the Cronbach's Alpha value is ≥ 0.70 . The average value of each dimension is then compared with the international benchmark UEQ-S to determine the user experience quality category: Excellent, Good, Above Average, Below Average, or Bad. The final interpretation of the results is used to identify the extent to which the Kiffah prototype provides a positive user experience and any aspects that need improvement before developing the final version of the application. It should be noted that this study has several methodological limitations. First, the number of respondents, 35 students, although meeting the minimum threshold for quantitative UX evaluation, is still relatively limited, so generalization of the results requires caution. Second, the self-report UEQ-S instrument is susceptible to subjective perception bias, where students' assessments can be influenced by factors beyond the quality of the application itself, such as previous experience with similar technologies or the level of enthusiasm when completing the questionnaire. Third, the evaluation was conducted only at the initial prototype stage, so these findings do not yet reflect the UX quality of the final version of the application.

RESULTS AND DISCUSSION

1. Application User Interfaces

Kiffah is a prototype of interactive learning media in the form of a digital comic developed as a learning aid for Fiqh (Islamic jurisprudence) in the field of Muamalah. The prototype being tested contains core features that represent the application's primary functions, as described below: The main menu serves as a navigation center for users, with a design focused on easy access to learning content.



Figure 1 Main Interface

The application's main interface, shown in Figure 1, is designed with four primary navigational elements. First, the Start button directs users to the comic episode selection screen. Second, the Learn button provides access to a summary of the Fiqh learning materials. Third, the About button displays information about the application and its developer. Finally, the Exit button shown in figure 2, (represented by the "X" icon) is accompanied by a confirmation dialog to prevent users from accidentally closing the application.



Figure 2 Exit Pop-up

To access the comic's storyline, users can press the Play button in the main menu (shown in Figure 3).



Figure 3 Story Menu

The Materials Menu is accessed through the Learn button on the Main Menu. This page provides direct access to a summary of the material. Users can select one of the three available material buttons to view a detailed explanation of each topic as shown in Figure 4.

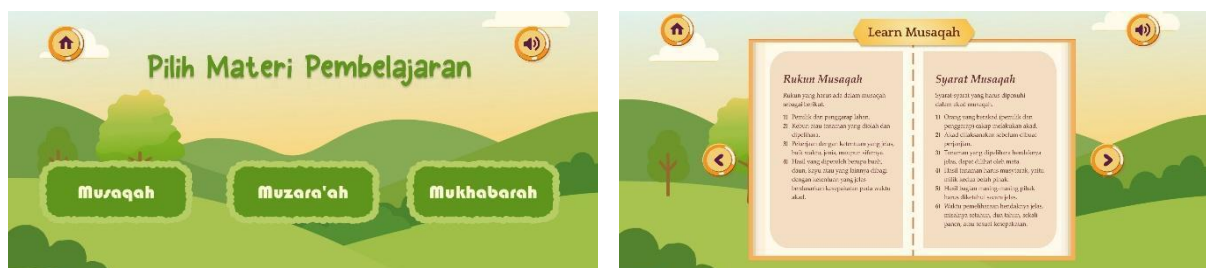


Figure 4 Learn Menu

The Kiffah prototype integrates three key interactive features as represented in figure 5. These include pop-ups that provide additional explanations related to the material, branching dialogues that give users the flexibility to choose conversational responses, resulting in varying impacts on the storyline, and scene navigation, a control system that allows users to adjust the reading pace (forward or backward) according to their individual comprehension level.



Figure 5 Interactive Elements

The final section of this prototype includes the Wisdom feature, a summary page that presents the essential points of the completed comic narrative. A preview of this feature is shown in Figure 6.



Figure 6 Summary/Wisdom Feature

This feature is designed to ensure that the learning outcomes of Muamalah material are delivered systematically before the user ends the application usage session.

2. Data Analysis Results

Data collection was conducted directly after students completed the application session. Data analysis began with instrument reliability testing to ensure the internal consistency of the scales used. The test results showed that all UEQ-S scales in this study had high reliability, with Cronbach's Alpha values of 0.93 for Pragmatic Quality and 0.94 for Hedonic Quality. These values are above the threshold of 0.7, thus declaring the instrument reliable.

Table 2 Cronbach's Alpha Reliability Test Results

Measurement Scale	Alpha Value	Description
Pragmatic Quality	0.93	Reliable
Hedonic Quality	0.94	Reliable

Next, the UEQ-S data processing results in an average score (mean) for each evaluated dimension. To objectively validate the application's quality, this average value is compared with an external UEQ benchmark dataset. Score interpretation categories are arranged based on the average value intervals, as presented in Table 3.

Table 3 Interpretation of UEQ Scores

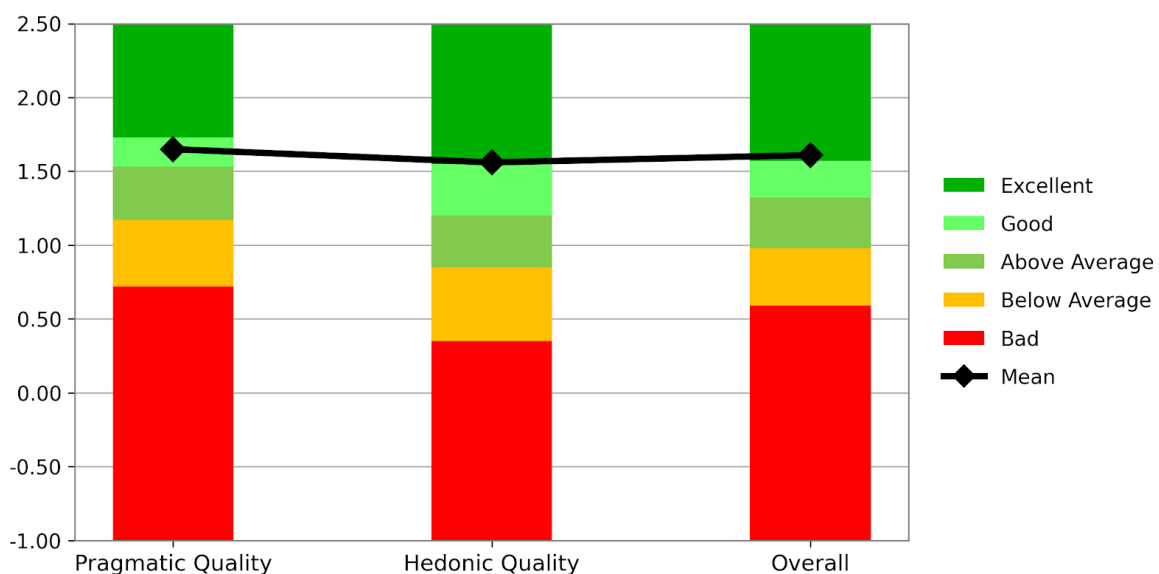
Category	Mean	Description
Excellent	≥ 1.75	10% Best
Good	≥ 1.55	10-25% Best
Above Average	≥ 1.17	25-50% Best
Below Average	≥ 0.70	50-75% Best
Bad	≥ 0.70	25% Worst

The Kiffah application prototype received positive evaluations from all respondents, with an overall score of $M = 1.61$, well above the positive threshold ($+0.8$). The full results are presented in Table 4.

Table 4 Average UEQ-S Score Results and Benchmark Comparison

Measurement Scale	Mean	Benchmark Category	Benchmark Interpretation
Pragmatic Quality	1.65	Good	Better than 75% of products
Hedonic Quality	1.57	Good	Better than 75% of products
Overall	1.61	Excellent	Excellent within the top 10% of products

Figure 7 presents a comparison of Kiffah's scores with the international UEQ benchmark, providing broader context for the results. The Pragmatic Quality ($M = 1.65$) and Hedonic Quality ($M = 1.57$) scores are both in the Good category, indicating that Kiffah is rated better than approximately 75% of products in the UEQ benchmark dataset. Furthermore, the overall score ($M = 1.61$) reaches the Excellent category, placing Kiffah among the top 10% of products ever evaluated using this instrument. These findings indicate that while the app scores Good on each dimension individually, the balance between the app's functional and emotional aspects is excellent compared to other products in the UEQ database. This consistent positive rating across both dimensions elevates the overall user experience quality into the top 10% (Excellent).

**Figure 7** Comparison Chart of Kiffah Score with UEQ Benchmark

Benchmark results place the Kiffah app in the Excellent category across all dimensions. This indicates that the quality of Kiffah's user experience is excellent, surpassing the majority of products in the benchmark dataset. The balance between pragmatic and hedonic dimensions is a strong indicator that this app is worthy of widespread implementation as a digital learning tool.

3. Discussions

The results of this study indicate that the Kiffah application prototype successfully delivered a very positive user experience, even during the initial evaluation stage. The Pragmatic Quality score, which was in the Good category ($M = 1.65$), indicates that users considered the application easy to use, clear, and efficient in supporting the learning process. This indicates that the navigation flow, interface design, and presentation of the application align with user-centered design principles. Although still in prototype form, Kiffah is already able to provide an intuitive interaction experience, allowing students to understand how to use the application without experiencing significant confusion. These results align with the findings of Savitri and Ratnasari (2023), who evaluated the UII RAS application using the UEQ and obtained a positive category on the pragmatic dimension, with intuitive navigation as a key success factor. Furthermore, Amajida et al. (2025), in their evaluation of the E-Peken Surabaya application, also found that interface clarity and navigation efficiency were the main predictors of user satisfaction in public education-based applications. This consistency of findings strengthens the argument that user-centered interface design is a critical foundation for the acceptance of digital applications in learning contexts.

In the Hedonic Quality dimension, a score of 1.57 also indicates satisfactory results. This dimension relates to aspects of enjoyment, novelty, and emotional appeal to users of the application. The digital comic format proposed by Kiffah has proven to be able to provide a fun and innovative learning experience. Visual and narrative elements integrated with Fiqh material make the learning process feel lighter and more interesting. This finding is in line with the research of Putra and Al Azam (2023) who evaluated the Musea AR application using UEQ and found that rich visual elements contributed significantly to positive hedonic scores. Similarly, Fariha et al. (2024) in their UX evaluation of the OVO application reported that stimulation factors and design novelty were the aspects that most influenced users' hedonic perceptions of digital applications. Theoretically, these results support the view that the integration of visual narrative elements in learning media as implemented by Kiffah can meet users' hedonic psychological needs while encouraging deeper cognitive engagement, in line with the theory of intrinsic motivation in the context of technology-based learning. Thus, Kiffah not only functions as an informative learning medium, but also as a learning tool that stimulates students' creativity and curiosity.

Overall, the overall score of 1.61, which falls into the Excellent category, confirms that the Kiffah application has excellent user experience appeal and quality. This balance between functional (pragmatic) and emotional (hedonic) aspects is a finding that deserves critical examination. When compared to UX evaluations in similar learning media contexts, such as the study by Putra and Al Azam (2023) on the Musea AR application, which received Above Average to Good categories, Kiffah's overall Excellent score indicates a significant competitive advantage. However, there are several critical points to note. The slightly lower Hedonic Quality score ($M = 1.57$) compared to Pragmatic Quality ($M = 1.65$) indicates that the stimulation and novelty aspects of the design still have room for development, particularly in terms of more varied interactive element innovation. From a theoretical implication perspective, this finding strengthens the argument that effective digital learning media design must simultaneously consider the balance between pragmatic and hedonic qualities, rather than solely focusing on functional aspects. Practically, the results of this study provide an empirical basis for developers of religious content-based digital learning media to adopt a standardized UX evaluation approach from the early prototype stage, to ensure that the final product truly meets user expectations and needs.

CONCLUSIONS

This study aims to evaluate the user experience of the Kiffah prototype, a digital comic-based interactive learning media for the Fiqh subject of Muamalah (Islamic Law) for 10th grade. Based on the results of the analysis using the User Experience Questionnaire–Short (UEQ-S) on 35 respondents, the results obtained were that Kiffah had a positive level of user experience in two main dimensions: pragmatic quality and hedonic quality. The pragmatic quality dimension indicates that the application is easy to use, efficient, and has a clear navigation flow, while the hedonic quality dimension indicates that Kiffah is considered interesting, creative, and able to provide a pleasant learning experience. The overall score is in the Good to Excellent category based on the international UEQ benchmark, indicating that this prototype has met both functional and aesthetic quality standards in the context of digital learning media. Overall, these findings prove that the digital comic approach is an effective design strategy for technology-based learning media in religious subjects. Thus, it can be concluded that Kiffah is effective as an interactive learning medium that can increase learning interest and provide a positive experience for students in understanding Fiqh material.

These findings further emphasize the relevance of the digital comic approach as a learning medium that is not only informative but also capable of simultaneously fulfilling users' hedonic needs. However, several limitations must be acknowledged. First, the study's limited sample size of 35 students from a single Islamic school with relatively homogeneous characteristics limits the generalizability of the findings to a broader and more diverse population. Second, the evaluation was conducted only at the initial prototype stage, so these findings do not fully reflect the UX quality of the final version of the application. Third, the UEQ-S self-report instrument potentially contains subjective perception bias that cannot be completely eliminated. Further research with a larger and more diverse sample, mixed methods (quantitative-qualitative), and evaluation of the final version of the application is highly recommended.

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