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User Experience Analysis Mobile eFootball Game Using the Method User Experience Questionnaire (UEQ)

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ABSTRACT

This study aims to evaluate the user experience of the eFootball Mobile game application using the User Experience Questionnaire (UEQ) method. The evaluation covers six main dimensions: Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty. Data were collected through a Google Forms-based questionnaire using a purposive sampling technique involving 70 active users. The responses were analyzed using the UEQ Data Analysis Tool to determine the mean, standard deviation, confidence interval, and benchmark results. The findings indicate that the dimensions of Attractiveness (1.47), Perspicuity (1.46), Efficiency (1.42), and Dependability (1.37) were classified as Above Average, while Stimulation (1.43) and Novelty (1.43) were categorized as Good. Although all dimensions received positive evaluations, with mean scores above 0.8, Dependability recorded the lowest score. Therefore, this dimension should be prioritized for further improvement, particularly in terms of system predictability, consistency, and user control. Overall, the user experience quality of eFootball Mobile is considered positive and competitive based on the UEQ benchmark results.

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1. INTRODUCTION

The rapid development of digital technology has significantly transformed the way people access and enjoy entertainment. One of the most prominent forms of digital entertainment is mobile gaming, which offers users an interactive, flexible, and easily accessible gaming experience through smartphones and other mobile devices. The increasing performance of mobile technology, wider internet access, and the availability of various digital platforms have encouraged the growth of the mobile game industry worldwide. Mobile games are no longer viewed solely as casual entertainment but have also become part of social interaction, digital communities, competitive activities, and the broader eSports ecosystem.

Among the various mobile games available today, eFootball Mobile has emerged as one of the most popular football simulation games. The game provides users with a virtual football experience that includes team management, player development, tactical settings, online matches, and competitive events. Its realistic visual presentation, licensed football content, regular updates, and multiplayer features have attracted a large number of users from different age groups. In Indonesia, eFootball Mobile has developed a substantial player community and has become part of the growing competitive gaming environment. Players interact not only within the game but also through social media, online forums, tournaments, and community-based events.

However, a large number of users and a high level of popularity do not necessarily indicate that an application provides a satisfactory user experience. Users may continue to use a popular game despite experiencing several problems, such as complicated navigation, unstable server performance, delayed responses, unclear menus, control difficulties, repetitive content, or a lack of innovation. These problems can influence user satisfaction, engagement, trust, and willingness to continue using the application. Therefore, the quality of a game application should not be evaluated solely based on the number of downloads, active users, or commercial success. A more systematic assessment is needed to understand how users perceive and interact with the application.

User experience is an important aspect of digital product development because it reflects the overall perceptions, emotions, and responses that arise before, during, and after users interact with a system. In the context of mobile games, user experience includes not only functional aspects, such as ease of use, efficiency, and system reliability, but also emotional and hedonic aspects, including enjoyment, excitement, attractiveness, and novelty. A positive user experience can increase user satisfaction, strengthen user loyalty, and encourage continued engagement. Conversely, a negative experience can lead to frustration, reduced playing intensity, negative reviews, and user migration to competing applications.

Evaluating the user experience of eFootball Mobile is therefore necessary to identify the strengths and weaknesses of the application from the users' perspective. Such an evaluation can provide empirical information regarding whether the application is easy to understand, efficient to operate, visually attractive, dependable, stimulating, and innovative. The results may also help developers determine which aspects have met user expectations and which aspects still require improvement. This is particularly important because mobile game users have increasingly high expectations regarding performance, interface quality, responsiveness, content variation, and competitive fairness.

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This study employs the User Experience Questionnaire (UEQ) as the main evaluation instrument. The UEQ is used to measure users' perceptions of interactive products through six dimensions: Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty. Attractiveness measures the overall impression and appeal of the application. Perspicuity evaluates whether the application is easy to understand and learn. Efficiency examines whether users can complete activities quickly and effectively. Dependability assesses the predictability, consistency, and sense of control experienced by users. Stimulation measures the extent to which the application is exciting and motivating, while Novelty evaluates its creativity, innovation, and ability to provide a fresh experience.

By applying the UEQ method, this study seeks to obtain a comprehensive and measurable overview of the user experience quality of eFootball Mobile. The evaluation is expected to reveal dimensions that have performed well and dimensions that require further improvement. In addition, the results can serve as useful input for game developers in improving interface design, navigation, responsiveness, system stability, gameplay innovation, and overall user satisfaction. Therefore, this study not only contributes to the evaluation of a specific mobile game but also demonstrates the importance of user-centered assessment in the development of competitive and sustainable digital entertainment applications.

2. METHODS

This study employed a quantitative research approach to evaluate the user experience of the **eFootball Mobile** game application. The primary instrument used in the study was the **User Experience Questionnaire (UEQ)**, which consists of 26 bipolar statement items distributed across six main dimensions: **Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation,** and **Novelty**. These dimensions were selected because they provide a comprehensive assessment of both pragmatic and hedonic aspects of user experience. The pragmatic dimensions focus on ease of use, efficiency, clarity, and system reliability, while the hedonic dimensions examine user motivation, enjoyment, innovation, and emotional engagement with the application.

The respondents were selected using a **purposive sampling** technique based on predetermined inclusion criteria. Participants were required to have used or played **eFootball Mobile** for more than one month to ensure that they had sufficient experience in interacting with the application. This criterion was intended to reduce the possibility of responses being based only on first impressions or limited usage. A total of 70 respondents participated in the study, with the majority consisting of students from Gunadarma University. Their familiarity with smartphones, mobile applications, and digital gaming platforms made them relevant participants for evaluating the user experience of the game.

Data were collected through an online questionnaire created using **Google Forms**. The questionnaire link was distributed through communication and community platforms, particularly **WhatsApp** and **Discord**, because these platforms are commonly used by students and gaming communities. Online distribution allowed the researchers to reach respondents efficiently and provided participants with flexibility in completing the questionnaire. Before answering the UEQ items, respondents were informed about the purpose of the study and the criteria for participation. They were also asked to provide basic demographic and usage-related information to support the interpretation of the research findings.

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The collected data were processed using the **UEQ Data Analysis Tool (DAT)** in **Microsoft Excel**. This tool was used to calculate the mean score and standard deviation for each UEQ dimension. The mean value was used to determine the general tendency of user perceptions, while the standard deviation was used to identify the variation in respondents' answers. Positive mean scores indicated favorable evaluations of the application, whereas negative scores indicated less favorable user perceptions. The analysis also included confidence intervals to estimate the precision and stability of the calculated mean scores.

In addition to descriptive analysis, the internal consistency of the questionnaire was examined using the **Cronbach's Alpha** reliability test. This test was conducted to determine whether the items within each UEQ dimension consistently measured the same underlying concept. A satisfactory reliability value indicated that the instrument produced consistent and dependable measurements. The reliability analysis was therefore important for supporting the credibility of the findings and ensuring that the collected responses could be used for further interpretation.

The final stage of the analysis involved comparing the mean scores of each UEQ dimension with the UEQ benchmark dataset. The benchmark contains results from more than 400 international product evaluations and classifies user experience scores into several categories, including **Excellent, Good, Above Average, Below Average,** and **Bad**. This comparison enabled the researchers to evaluate the relative position of **eFootball Mobile** against other interactive digital products. Through this process, the study was able to identify dimensions that demonstrated strong performance and dimensions that still required improvement. Overall, the selected methodology provided a systematic and measurable framework for assessing the quality of the user experience offered by **eFootball Mobile**.

3. RESULTS AND DISCUSSION

3.1. RESULTS

This study involved 70 respondents, most of whom were students at Gunadarma University. The reliability test used*Cronbach's Alpha*shows that all UEQ dimensions are above 0.6, so it is declared reliable. After being carried out*data cleaning*for inconsistent answers, the calculation results*mean* And *variance*on the six dimensions of the UEQ, respondents tended to have a positive assessment of the application.*eFootball Mobile*.

Mark *Pragmatic Quality*recorded at 1.42 and*Hedonic Quality*of 1.43, indicating that both the functional and emotional aspects of the user experience were assessed positively.*Attractiveness*of 1.47 also confirms that the overall user experience is perceived as good and enjoyable.

Analysis *benchmark*against more than 400 international UEQ datasets shows that all four dimensions*Attractiveness, Perspicuity, Efficiency,* And *Dependability*is in the category*Above Average*, whereas *Stimulation* And *Novelty*is in the category*Good*, as summarized in Table 1.

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Table 1. Results *Benchmark* Six Dimensions UEQ Mobile eFootball Application

UEQ Dimensions	Mean	Benchmark Category
Attractiveness	1.47	Above Average
Perspicuity	1.46	Above Average
Efficiency	1.42	Above Average
Dependability	1.37	Above Average
Stimulation	1.43	Good
Novelty	1.43	Good

3.2. DISCUSSION

Although all dimensions of the UEQ received positive evaluations, *Dependability* recorded as the dimension with the lowest value (1.37) compared to other dimensions. This shows that the aspects of system accuracy, response consistency, and feature reliability are still the areas with the most potential for improvement. *eFootball Mobile*.

Dependability as a Priority Area for Improvement

Contribution to Application Development

This finding is important because *Dependability* directly related to the stability of the gaming experience, especially in competitive games like *eFootball Mobile*, where system reliability greatly affects user comfort. Overall, the results *bench mark* reinforces that the quality of the user experience *eFootball Mobile* not only positive internally, but also competitive compared to hundreds of other products in the UEQ dataset.

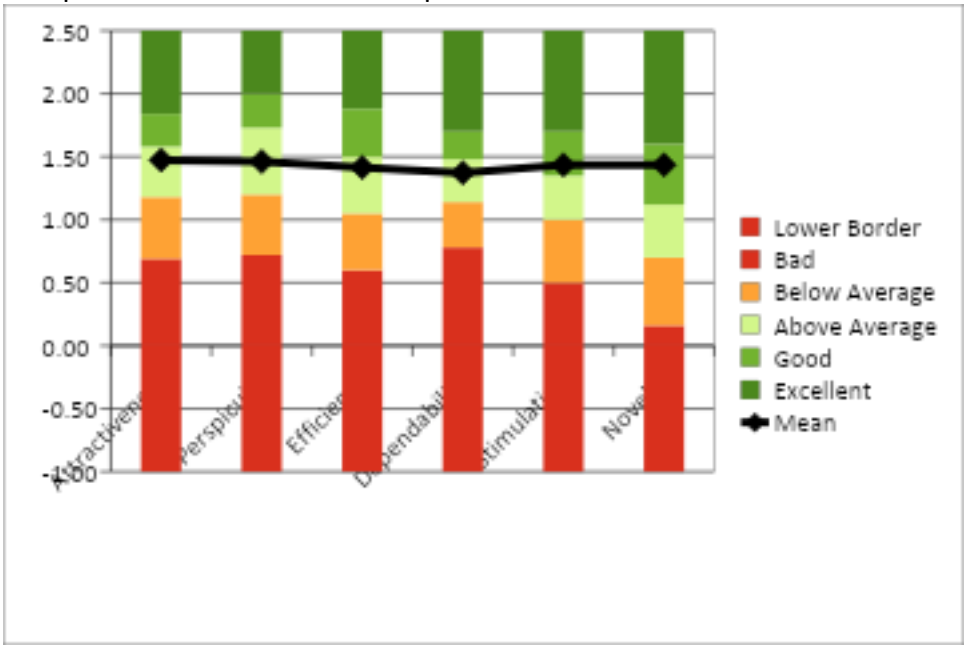

FIGURE 1.UEQ eFootball Mobile Six-Dimensional Benchmark Results

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4. CONCLUSION

The results of the user experience analysis of **eFootball Mobile** using the **User Experience Questionnaire (UEQ)** indicate that all six evaluated dimensions received positive scores. This finding shows that users generally have a favorable perception of the application, both in terms of functional performance and emotional experience. Based on the UEQ interpretation criteria, scores above 0.8 are considered positive, suggesting that **eFootball Mobile** is able to provide a satisfactory experience for most respondents.

The **Attractiveness** dimension obtained a mean score of **1.47** and was classified in the **Above Average** category. This result indicates that users generally perceive **eFootball Mobile** as an appealing and enjoyable application. The visual appearance, gameplay experience, interface design, and overall impression of the game were considered sufficiently attractive. A positive score in this dimension is important because attractiveness reflects users' general acceptance of the application and can influence their willingness to continue using it.

The **Perspicuity** dimension recorded a mean score of **1.46**, which was also categorized as **Above Average**. This score indicates that users considered the application relatively easy to understand and learn. The menus, controls, instructions, and gameplay mechanisms were generally perceived as clear enough to support user interaction. This finding suggests that users, particularly those who have played the game for more than one month, were able to become familiar with the application without experiencing major difficulties.

The **Efficiency** dimension achieved a mean score of **1.42** and was classified in the **Above Average** category. This result suggests that users were generally able to operate the application and complete game-related activities efficiently. Features such as team management, match selection, player arrangement, and menu navigation were considered reasonably effective. However, the score also indicates that there is still room for improvement, particularly in reducing loading time, simplifying several interaction processes, and improving the responsiveness of certain features.

The **Dependability** dimension obtained the lowest mean score, at **1.37**, although it remained in the **Above Average** category. This dimension reflects users' perceptions of system predictability, consistency, control, and reliability. The comparatively lower score may indicate that some users experienced problems related to connection stability, delayed responses, inconsistent performance, unexpected errors, or limited control during gameplay. Therefore, Dependability should be considered the main priority for further improvement.

Meanwhile, the **Stimulation** dimension received a mean score of **1.43** and was classified in the **Good** category. This finding indicates that the game is able to provide an exciting, motivating, and engaging experience. Competitive matches, team development, online interaction, and regular events may contribute to users' motivation to continue playing. A strong stimulation score also suggests that the application successfully maintains user interest through challenging and entertaining gameplay.

The **Novelty** dimension also obtained a mean score of **1.43** and was categorized as **Good**. This result shows that users generally viewed **eFootball Mobile** as sufficiently innovative and creative. Features such as tactical customization, player updates, live events, and competitive game modes may have contributed to this positive perception. Nevertheless, continuous

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innovation remains necessary because mobile game users often expect new content, improved gameplay mechanics, and regular feature development.

Overall, the UEQ benchmark results demonstrate that the user experience quality of **eFootball Mobile** is positive and relatively competitive compared with other interactive products included in the UEQ benchmark dataset. The positive evaluation across all dimensions indicates that the application has successfully fulfilled many user expectations related to attractiveness, clarity, efficiency, stimulation, and novelty. However, the comparatively lower score for Dependability highlights the need for developers to focus on improving system stability, response speed, server reliability, gameplay consistency, and overall application performance. Addressing these aspects may further strengthen user satisfaction, increase user trust, and support long-term engagement with **eFootball Mobile**.

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