



Application of User Experience Questionnaire Method to Evaluate Customer Experience When Conducting Transactions with Digital Wallets

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Abstract

The purpose of this study is to determine how to use the user experience questionnaire (UEQ) to assess the digital wallet user experience. This research employs a quantitative methodology. In order to collect data for this study, surveys, observation, and literature reviews were used. All of the participants in this study are users of digital wallets. In this study, 100 samples were drawn using simple random sampling as the sampling technique. The two types of data analysis were statistical analysis and demographic analysis. The author examined demographic information first. Second, the author used the UEQ Data Analysis Tool to perform statistical analysis. Testing for validity and reliability was done at this point. The discussion's outcomes allow for the following deductions to be made: This study was successful in assessing how digital wallets performed across the board on the user experience questionnaire (UEQ). Based on evaluation findings using UEQ, this research was successful in offering suggestions for enhancing the user experience in digital wallets. The attractiveness and novelty parts of the user experience are the areas that are advised to be improved upon, since they continue to receive below-average benchmark scores.

Keywords: User Experience, Digital Wallet, UEQ, Questionnaire.

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1. Introduction

The field of information technology has advanced quickly in our globalized age [1]. Information technology is increasingly being used to support a wide range of everyday human activities [2]. Information technology's capacity to swiftly and effectively handle and store data and information lends support to this [3] [4]. Information technology can be used to complete transactions more quickly, effectively, anytime, and anywhere thanks to this capabilities [5]. The financial technology (fintech) sector is one that processes transactions using advances in information technology [6]. The term financial technology, or fintech, combines the words "financial" and "technology" to describe innovation in the financial services industry with a dash of contemporary technology [7]. Fintech, to put it broadly, is the use of technology to deliver financial solutions that increase the efficiency of the financial system and financial services [8]. Fintech is specifically defined as the use of digital technology to solve issues related to financial intermediation. In essence, the public can use a variety of fintech services and products [9]. But according to Bank Indonesia, there are four categories of fintech: market aggregators; investment risk management; payment, clearing, and settlement; and peer-to-peer (P2P) lending and crowdfunding [10].

Digital wallets are one of the fintechs that Indonesia is producing. A digital wallet is an electronic application for carrying out online transactions and payments [11]. Its function is the same as that of physical wallets in general, where cash is usually used, but now it is replaced with electronic money when making payments [12]. There are various digital wallets in Indonesia. Based on previous research, of the 001 respondents surveyed, Go-Pay had the most users, with a percentage of 80%. Then followed OVO in second place with a percentage of 78%. Followed, respectively, by DANA and LinkAja with percentages of 66% and 52% [13]. Even though it has the second-most users and is not far behind Go-Pay [14] [15]. Currently, OVO has the lowest assessment rating on the Google Play Store (at 3.4) when compared to Go-Pay (at 3.9), DANA (at 4.2), and LinkAja (at 3.3). Based on observations of the OVO application assessment on the Google Play Store, users complained about problems or errors with the OVO application [16]. The following is an example of a complaint made by a user through a review on the Google Play Store: "Upgrading OVO Premier is difficult." Users also complain, "I can't log in."

User complaints typically address issues with the application's system and service quality [17]. In fact, the higher the quality of the service provided, the more it will significantly influence the level of user satisfaction [18]. The likelihood that users will continue to use information technology products and services increases with the level of user satisfaction, which in turn depends on the user's experience with those products and services [19]. Poor system and service quality disrupts the user experience in various aspects, such as pragmatic quality aspects such as users not being able to complete a goal quickly and efficiently and things happening that are not in line with user expectations [20]. This can make users bored and no longer interested in using the product (hedonic quality) [21]. Therefore, in order for digital wallet applications to improve user experience, it is necessary to evaluate the current level of user experience to identify areas of user experience that require improvement [22]. Apart from that, this research is the beginning of measuring the user experience of the OVO digital wallet using UEQ [23]. Researchers employed the user experience questionnaire (UEQ) paradigm to gauge how well users were experiencing digital wallet applications [24]. UEQ's primary objective is to measure user experience in a direct and timely manner [25]. The most popular approach for user experience evaluation in 2018 is UEQ. When compared to the SUS, QUIS, SUPR-Q, and SUMI frameworks, UEQ offers a far more complete view of the user experience, encompassing both traditional usability and user experience components [26]. It also contains tool analytic capabilities that enable proper interpretation of evaluation data [27]. An assessment technique for gauging user experience using a questionnaire is the user experience questionnaire (UEQ) [28]. In order to quantify user experience, Laugwitz, Schrepp, and Held developed the user experience questionnaire (UEQ) in 2005 [29]. The UEQ was first only offered in German [30]. Indonesian is one of the more than thirty languages in which UEQ is currently available [31]. There are no licensing costs for using UEQ. UEQ can be used in a variety of ways. UEQ can be used to assess if a product offers a sufficient user experience, compare the user experiences of two products, and identify areas that want improvement [32]. When compared to QUIS, SUPR-Q, and SUS, UEQ offers notable benefits. From traditional usability aspects to user experience aspects, UEQ gives the sense of a complete user experience [33]. UEQ also provides analysis tools to accurately interpret the results. UEQ is also freely available to use at no cost [34].

There are several similar studies that have been carried out regarding the user experience evaluation process for SAP products using UEQ as well as to obtain user experience evaluations based on length of use, length of training, and age of the user on the six user experience factors [35]. There is research measuring the user experience of the SCELE learning management system, which has developed an Indonesian adaptation of the user experience questionnaire (UEQ) [36]. Apart from that, research regarding user experience testing on the Indonesian Ministry of Manpower's Labor Market Information System was conducted to determine the level of user experience based on UEQ aspects [37]. An instrument is used during an evaluation to assess an object's state. The results are compared to benchmarks in order to draw conclusions [38]. Evaluations are planned activities [39]. The methodical process of gathering, characterizing, analyzing, and summarizing data on a program is called evaluation, and it serves as a foundation for making decisions, developing policies, and creating new initiatives [40]. The process of developing interactive product designs to enhance how people communicate and engage in their daily lives and at work is known as interaction design, or user experience [41]. Stated differently, the goal is to design a user experience that improves how individuals interact, work, and communicate. Creating useable interactive goods is the primary goal of interaction design [42]. A product that is generally simple to use, efficient to utilize, and offers a pleasurable user experience is considered useable interactive. The term "user experience" refers to the opinions and reactions of a user as a result of using or planning to use a system, good, or service. Before, during, and after use, a user's emotions, beliefs, preferences, perceptions, comfort level, behavior, and accomplishments are all included in their perceptions and responses.

2. Research Methods

This study employs a quantitative methodology. As part of a quantitative methodology, this study employs numerical research data and statistical analysis. Descriptive statistics were used to do a quantitative analysis on the data gathered for this study. Some of the features of quantitative research are met by this study's use of questionnaires as a data collection tool. There are independent and dependent variables in this quantitative study. when there is a cause-and-effect link between the independent and dependent variables. In order to collect data for this study, surveys, observation, and literature reviews were used. In order to get the needed data at this point, the researcher distributed questionnaires as part of a survey. All of the participants in this study are users of digital wallets. Simple random sampling is the sampling strategy employed in this study, in which samples are drawn at random from every member of the population. There were one hundred samples collected. The two types of data analysis were statistical analysis and demographic analysis. The author examined demographic information first. We've grouped respondent data according to age, gender, level of education at the moment, duration of use, and frequency of use. Second, the UEQ Data Analysis Tool version 9 was utilized by the author to perform statistical analysis. Testing for validity and reliability was done at this point. In the reliability test, each research variable's Cronbach alpha (α) value was examined, but in the validity test, each indicator's Pearson correlation value for each

variable was examined. Third, the author analyzes the data to ascertain the value of each variable and offers suggestions for improvement by going over the findings of the questionnaire data analysis and the results of the respondents' demographic analysis.

3. Results and Discussion

Based on the results of the demographic analysis of respondents that has been carried out, it can be said that the majority of respondents are women. This may indicate that more women use digital wallets than men. According to research by Google and Growth from Knowledge (GfK), Indonesian women adopt the use of digital wallets more readily than men. The majority of respondents were aged 17–24 years. This may indicate that digital wallet users are predominantly young. The majority of respondents had a high school education or less. The distribution of questionnaires via social media, where the respondents are young, may have an impact on this. The majority of respondents live in western Indonesia. This could indicate that digital wallets are being adopted more quickly in Western Indonesia. This can also happen because researchers distribute questionnaires in collaboration with relatives, the majority of whom live in Western Indonesia. The majority of respondents have used digital wallets for 1–3 years. This shows that the respondents to this questionnaire have been using digital wallets for quite some time. This is in accordance with similar research conducted previously, where the majority of users have used the OVO digital wallet for more than a year. The majority of respondents often use digital wallets. This shows that respondents to this questionnaire often use digital wallets. Based on the results of quantitative data analysis that has been carried out previously by carrying out validity and reliability tests, it can be concluded that all items and variables in this research have succeeded in measuring all aspects of user experience (valid), and the data obtained can be trusted and is able to reveal true information (reliable). Based on data that has been tested for validity and reliability, an analysis of the user experience of digital wallet users can be carried out using descriptive statistics.

One assessment variable for user experience that highlights the user's overall opinion of the digital wallet that is, whether they like it or not is its attractiveness. The analysis's findings indicate that the beauty variable has a favorable evaluation value. With the exception of the ATT6 indication, which indicates whether something is user-friendly or not, almost all indicators in the attractiveness variable receive favorable rating values. A user experience assessment variable called perspicuity highlights the likelihood that a user will be able to comprehend how to use a product with ease, specifically whether the user will find it easy to learn about or become accustomed to utilizing digital wallets. One measure of the user experience that highlights how quickly and easily users may finish a job is the efficiency variable. One measurement variable for user experience that highlights the degree of control a user thinks they have when using a digital wallet is reliability. The dependability variable has a positive rating value based on the findings. Every signal within the dependability variable achieved an evaluation value that was positive. A user experience measuring variable called the stimulation variable gauges how motivated and pleasurable using a digital wallet is for the user. An evaluation value of positive is assigned to the stimulation variable. With the exception of the STI4 indication (motivating or not motivating), which has a neutral evaluation value, almost all of the indicators in the stimulation variable have positive assessment values. In order to draw users' attention, digital wallets should prioritize their level of innovation and creativity, which is why the novelty variable is used to quantify user experience. A neutral evaluation value is assigned to the novelty variable. With the exception of the NOV3 indication (common/leading), which has a positive evaluation value, almost all of the indicators in the novelty variable have neutral assessment values.

The Eden Farm app has been studied before, and an evaluation using six scales from the User Experience Questionnaire (UEQ) shows that four scales have below-average results. These are perspicuity, efficiency, stimulation, and novelty. Meanwhile, two other scales, attractiveness and dependability, also received low ratings. From in-depth analysis, it is known that of the 30 problems identified, they are divided into 12 types of 15 e-learning heuristic principles. H1 (visibility of system state), H4 (consistency and standards), and H7 (aesthetic) are three of the recognized heuristic principles that, in particular, demand for greater focus in application enhancement. Nonetheless, the study reveals a higher degree of severity for heuristic principle H5, which is error prevention. Three primary areas of improvement are recommended by prior research: system and security enhancements, user interface design, and user training. Even though measurements with UEQ show improvements in certain aspects such as attractiveness, perspicuity, dependability, and efficiency, overall, the digital wallet received an above-average and good rating. However, there are novelty and stimulation variables that received neutral values, indicating areas that need to be improved in the user experience. Furthermore, the results of measurements with UEQ show that the attractiveness variable in the ATT6 indicator gets a bad rating. However, from previous measurements using the USE Questionnaire, the parameters usefulness, ease of learning, ease of use, and satisfaction show quite high values. Overall, there are important caveats to these assessments. Focus is needed on improving several aspects, such as novelty and stimulation, while maintaining good quality in other aspects.

Using the user experience questionnaire (UEQ) on digital wallets, the evaluation findings of each user experience measurement variable are determined. The green region indicates the aspects of beauty, perspicuity, efficiency, reliability, and stimulation that either achieved an average value above 0.7 or are at a positive rating level. In the

meantime, the novelty aspect which is represented by the yellow area gets an average value that falls between -0.7 and 0.7 or is at a neutral evaluation level. Following the determination of each variable's average value (mean), the average value is contrasted with the benchmark data set. To determine the relative quality of digital wallets in relation to other goods, a comparison of the values acquired with benchmark data is conducted. The digital wallet performs well in the efficiency category when compared to other products, and it performs above averagely in the reliability, stimulation, and perspicuity categories. Below-average ratings are given to the aspects of novelty and appeal. The outcomes of the benchmarking procedure with the UEQ Data Analysis Tool are listed below.

The results of the benchmarking process using the UEQ Data Analysis Tool show significant comparisons with other products in terms of the digital wallet user experience. From this analysis, it can be seen that this digital wallet has advantages in the efficiency aspect, which was rated as "good." Apart from that, other important aspects of the user experience, such as perspicuity, dependability, and stimulation, also received above-average ratings. This indicates that, in terms of clarity, reliability, and level of user stimulation, this product performs quite well compared to similar products. However, there are areas that need further attention. Aspects of attributes such as attractiveness and novelty received a "below average" rating. This shows that there is room for improvement in attracting user interest and providing a fresher or new experience when using this digital wallet. In the context of competition with similar products, these results provide important insight into the relative strengths and weaknesses of these digital wallets. While it excels in some aspects, there is room for developers to improve those aspects that received below-average ratings to increase the overall appeal and innovation of the user experience.

The following conclusions can be made in light of the outcomes of the earlier descriptive statistical analysis: Users of digital wallets rate the attractiveness, perspicuity, dependability, efficiency, and stimulation variables as positively evaluated, while the novelty variable receives neutral ratings. The variables with the highest average value are the perspicuity and lowest average value are the novelty. Users find digital wallets to be enjoyable, positive, supportive, cozy, and visually appealing when examining the attractiveness variable per item. Users, however, believe that digital wallets are not very user-friendly goods. Users believe that digital wallets are basic, easy to use, comprehensible, and clear when examined item by item in the perspicuity variable. If we look at the efficiency variable per item, users feel that digital wallets are fast, efficient, practical, and organized. If we look at the dependability variable item by item, users feel that digital wallets are predictable, supportive, safe, and meet expectations. If we look at each item in the stimulation variable, users find digital wallets useful, exciting, and interesting. Digital wallet users give neutral scores to motivating and unmotivating items. If we look at the novelty variable per item, users feel that digital wallets are at the forefront. However, users feel that digital wallets provide neutral value to creative/monotonous, inventive/conventional, and conservative/innovative items. In terms of benchmark value, the efficiency variable receives the highest good when compared to other items. The variables perspicuity, dependability, and stimulation get above-average values. Meanwhile, the attractiveness and novelty variables got the lowest value, namely below average.

Based on a survey of one hundred participants, the attractiveness, perspicuity, efficiency, dependability, and excitement of digital wallets were rated well overall. The mean score for each was 0.8, the average score for each was 1.6, and the average score for stimulation was 1.4. The novelty aspect (mean 0.6) received a neutral evaluation value. The efficiency aspect (mean 1.6) is known to have received a solid score based on the findings of the benchmark scores acquired for each UEQ aspect in the UEQ Data Analysis Tool. Averaging above average (above the average) marks were given to perspicuity (mean 1.7), dependability (mean 1.4), and stimulation (mean 1.2). Mere 0.8 and 0.6, respectively, were below average for the appeal and novelty characteristics. The following suggestions are made regarding digital wallets based on the findings of user experience assessments conducted using UEQ: Offer more user-friendly digital wallet services to raise the attractiveness variable's value. Encouraging the value of the novelty variable by offering digital wallet services that are more imaginative, creative, and unique.

4. Conclusion

The following conclusions can be made in light of the discussion's outcomes: The user experience questionnaire (UEQ) was successfully used in this study to assess the digital wallet user experience in all of its aspects. Based on UEQ evaluation results, this research was successful in offering suggestions for enhancing the digital wallet user experience. Since the beauty and novelty aspects still receive below-average benchmark scores, this is the recommended area for growing or improving the user experience. Measurement of user experience with UEQ for other digital wallets and comparison of evaluation results between digital wallets are two recommendations made by the author based on the findings of the research that has been conducted and can be taken into consideration by digital wallet parties and parties who wish to study this further. Heuristic evaluation and other techniques for evaluating user experience can be used in future study. In terms of originality and attractiveness, digital wallet parties must enhance the user experience. Areas related to aspects of efficiency, perspicuity, dependability, and stimulation must be maintained and improved to get even better scores.

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