Analysis of User Experience on The Bc Hni 1 E-Commerce Website Using The Ueq Method

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Abstract

This research was conducted at the HNI (Halal Network International) Cilacap 1 Business Center with a focus on analyzing the user experience of E-Commerce sites using the User Experience Questionnaire (UEQ) method. The background of this research is the progress of the industrial era 4.0 and the increasing use of the internet in Indonesia which changes consumer behavior. The goal is to evaluate aspects of user experience, including attractiveness, clarity, efficiency, accuracy, stimulation, and novelty on the BC HNI 1 E- Commerce website. This research uses a quantitative approach with a population of users or consumers who access the website. Data were collected through observations, interviews, questionnaire surveys, and literature studies. The research instrument is a UEQ questionnaire consisting of 26 items divided into 7 scales. Data analysis includes demographic analysis, validity test using Pearson Product Moment, and reliability test using Cronbach's Alpha. The results showed that the majority of respondents were women (72%) and young individuals under 30 years old (64%). All statements were declared valid and the research instrument was declared reliable with a Cronbach's Alpha value of 0.777. The user experience evaluation showed that all measured aspects, including attractiveness (mean 1.443), clarity (mean 1.830), efficiency (mean 1.710), accuracy (mean 1.815), stimulation (mean 1.595), and novelty (mean 1.560) received positive evaluation scores. The benchmark results show that attractiveness scored above average, clarity and efficiency scored good, and accuracy, stimulation, and novelty scored excellent.

Keywords*: User Experience, BC HNI, E-commerce, Website, UEQ*

1. INTRODUCTION

HNI (Halal Network International) is one of the Halal Network Business companies in Indonesia that focuses on herbal products.HNI or HNI HPAI according to the Company's deed of establishment, was officially established on March 19, 2012. The herbal products in question include Herbs Product (herbal herbal products), health food & beverages (health food & beverages), Cosmetics & home care (cosmetics & home care). HNI has a corporate body, PT Herba Penawar Alwahida Indonesia, later known as HPAI, which is one of the companies that provide halal and quality consumer goods products. HNI HPAI is the result of a long struggle with the aim of promoting quality halal products based on Thibbunnabawi; grounding, advancing, and actualizing the Islamic economy in Indonesia through entrepreneurship, and also participating in empowering and lifting national MSMEs [1].

Bussines Center Halal Network International (BC HNI) is a halalmart business institution, which is the first branch that distributes HNI products from the company to consumers and business institutions under it such as AC (Agency Center), DC (Distributor Center), SC (Stock Center) and AB (ordinary agents) or ordinary consumers who do not have member IDs [2].

In today's digital business era, it is certainly very influential on the progress of increasingly sophisticated times. Likewise with the buying and selling transactions of HNI products, which were originally only through the WhatsApp chat application, currently the strategy is to sell directly to the public. This is a market demand in following the trend of the industrial era 4.0, which is the integration of internet utilization through production lines in the industrial world. Changes in the industrial world are characterized by a shift in the business and industrial climate to become more competitive due to the development of information technology [3].

Data from the Indonesian Internet Service Providers Association (APJII) states that around 210 million of Indonesia's 272 million population will have access to the internet by 2021. A survey conducted by APJII concluded that 79% of survey respondents use the internet for online transactions, while 72% of respondents access financial services [4]. Therefore, this research was conducted to determine the extent to which internet actors understand and are able to use the website as a buying and selling transaction. The case study was conducted at BC HNI Cilacap 1 which has an E-Commerce website and needs to be evaluated. With the aim of evaluation in this E-Commerce website, it can penetrate various national boundaries, and increase the competitiveness of the company because it allows buyers to connect directly with sellers easily [5]. BC HNI 1 Cilacap E-commerce can be accessed through its official website https://e-halalmart.my.id/#

From the analysis of existing problems, this research was conducted to determine the user experience using the User Experience Questionare (UEQ) method. UEQ is an easy and efficient tool or questionnaire for measuring User Experience (UX). UEQ makes it easy for us to measure UX in an application design. UEQ contains 3 aspects, namely Attractiveness, pragmatic quality aspects related to perceived benefits, namely Ease (Perspicuity), Efficiency (Efficiency), accuracy (Dependability) and hedonic quality aspects related to novelty, Stimulation (Stimulation) [6]. These three aspects are divided into 6 scales with a total of 26 question elements.

According to Venkatesh (2000)[8], the ease of use dimension is divided into the following: a clear and understandable system can also facilitate interaction, minimize the effort to interact with the system, and easily apply the system that individuals work on. Ease of use of the system can be an important value for determining decisions, because users are more comfortable using a system that is easier and more practical [9].

The existence of a good impression on an e-commerce website obtained by user experience can generate satisfaction and encourage consumers to continue making online purchases and visits to the website. The following is one of the factors that affect the user's good impression: the first is transaction security which is defined as the ability of an online company website to protect consumer information and their financial transaction data. The second is an effective and efficient system that can provide unlimited service to its users, as well as fast access to information [10].

Customer satisfaction in online shopping through marketplaces is a major concern. Satisfaction can influence other potential customers through word of mouth or electronic data such as customer reviews that have an impact on their marketplace business. Customers must be managed as assets, including what customers need, preferences, and behavior in making purchases [7].

A study states that a website information system is strongly recommended to design and apply the user interface in the most comfortable, attractive way, such as the effective use of language, icons, and functional buttons on features, so that users can easily use and possibly revisit [10].

The BC HNI 1 E-commerce website is a new E-commerce platform that requires user experience analysis to optimize the role of E-commerce from the user's perspective whether this website meets user expectations or is still too far from user expectations.

2. RESEARCH METHODOLOGY

This research was conducted at BC HNI Cilacap 1, Jl. Laut Winong Rt 3 Rw 6 Semampir, Slarang Kesugihan Cilacap, for 6 months. The tools used included laptops/computers and office stationery, while the software used were Google Forms, Ms Word, and Ms Excel. The research procedure consists of literature review, data collection through observation, interview, and questionnaire survey, and data analysis. Observations were conducted on the BC HNI 1 E-commerce website to understand user experience, interviews to obtain in-depth information, and questionnaire surveys using the User Experience Questionnaire (UEQ) distributed through social media. The research instrument was designed based on user experience indicators such as attractiveness, clarity, efficiency, accuracy, stimulation, and novelty. Data analysis included demographic analysis, instrument validity and reliability tests, and comparison of results with industry standards. Data was processed using UEQ data analysis tools to facilitate interpretation of the results. The research results are presented in the form of graphs and website display mockups, with the research schedule planned in a Gantt Chart.

3. RESULTS AND DISCUSSION
1. Demographic Analysis

Demographic analysis in this study aims to understand the characteristics of the respondent population based on age, gender, and experience using e-commerce. Of the 50 respondents, 72% were female and 28% were male. The majority of respondents (64%) are under 30 years old, 30% are 31-50 years old, and only 6% are over 51 years old. In addition, 78% of respondents have had experience using e-commerce, while 22% have never used the platform. These results show that the majority of respondents are young women who are already familiar with online shopping, reflecting a growing trend in shopping preferences among young individuals who dominate this research sample.

2. Instrument Testing

Before being used in research, instruments must undergo validity and reliability tests to ensure that they are reliable in collecting data. The validity test aims to assess the extent to which the instrument can measure what it actually wants to measure, using the Product Moment Correlation method and SPSS software version 25. Based on the results of the validity test involving 50 respondents, all 26 items in the questionnaire proved to be valid with a significance value of less than 0.05.

In addition, the reliability test is used to assess the consistency and stability of respondents in answering questions related to the dimensions of the research variables. The technique used is Cronbach's Alpha scale reliability, where a questionnaire is considered reliable if the Cronbach's Alpha value is greater than 0.6. In this study, the Cronbach's Alpha value obtained was 0.777. These results indicate that the instrument has a good level of reliability.

Thus, based on the validity and reliability tests, this research instrument proved to be valid and reliable. Therefore, the instruments can be used with confidence to collect data in this study. Good validity and reliability results indicate that these instruments can be trusted to provide accurate and consistent results, thus supporting the quality and credibility of the research findings.

3. Analysis of UEQ Measurement Results

UX measurement using UEQ involved 50 respondents for BC HNI E-Commerce Website 1 with 26 questions covering six UX factors: attractiveness, clarity, efficiency, accuracy, stimulation, and novelty. For further analysis, these answers were converted into weighted scores from +3 to -3, which are presented in Table 11. These conversion results provide a more quantifiable view of the respondents' UX perceptions of the website.

4. UX Assessment Results and UX Comparison

The results of the UX assessment and UX comparison based on the UEQ scale on the BC HNI 1 E-Commerce Website. The average or mean scale results based on all questions that have been classified for each UEQ scale on the BC HNI 1 E-Commerce Website. The average impression value between -0.8 and 0.8 is a normal evaluation value, a value of >0.8 means a positive evaluation, and <-0.8 indicates a negative evaluation, it can be concluded that the BC HNI 1 E-Commerce Website has a positive impression of all scales, namely attractiveness, clarity (perspiculty), efficiency (efficiency), dependability, stimulation (stimulation), and novelty (novelty), can be seen in Table 1 for the average on the BC HNI 1 E-Commerce Website.
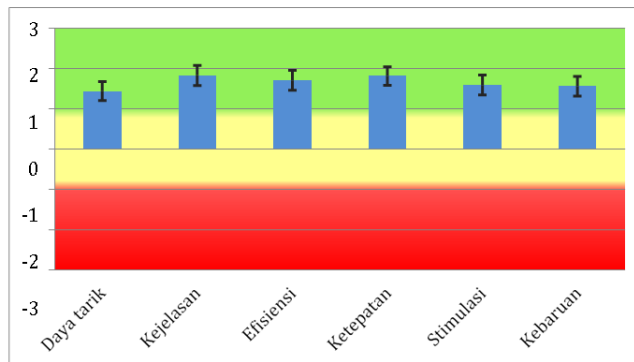
Table 1. Scale Means of BC HNI E-Commerce Website 1

Scale	Datasheet					
	Mean	Std. Dev.	N	Confidence	Confidence interval	
Attractiveness	1.443	0.844	50	0.234	1.210	1.677
Clarity	1.830	0.901	50	0.250	1.580	2.080

Scale	Datasheet					
	Mean	Std. Dev.	N	Confidence	Confidence interval	
Efficiency	1.710	0.900	50	0.249	1.461	1.959
Accuracy	1.815	0.836	50	0.232	1.583	2.047
Stimulation	1.595	0.895	50	0.248	1.347	1.843
Novelty	1.560	0.884	50	0.245	1.315	1.805

Attractiveness: Measures the user's overall impression of the website, whether the user likes it or not. The BC HNI 1 E-Commerce website received a positive evaluation with a mean of 1.443. Clarity (Perspicuity): Assesses how easily users understand and get used to using the website. The BC HNI 1 E-Commerce website received a positive evaluation with a mean of 1.830. Efficiency: Measures the ability of users to complete tasks quickly and efficiently. This website received a positive evaluation with a mean of 1.710. Dependability: Measures the level of control users feel when interacting with the website. The evaluation showed positive results with a mean of 1.815. Stimulation: Measures the user's level of motivation and pleasure in using the website. The website received a positive evaluation with a mean of 1.595. Novelty: Measures the level of innovation and creativity that attracts users' attention. The website received a positive evaluation with a mean of 1.560.


Figure 1. UEQ Scale Value Data of BC HNI E-Commerce Website 1

Figure 1 shows the evaluation results of each user experience measurement variable using the User Experience Questionnaire (UEQ) on the BC HNI 1 E-Commerce Website obtained from 50 respondents who filled out the questionnaire. Aspects of attractiveness, clarity, efficiency, accuracy, stimulation and novelty managed to get an average value above 0.8 or at a positive evaluation level marked with a green area.

5. Benchmark Test
After the average value (mean) of each variable is obtained, a comparison of the average value against the benchmark data set is made. Comparison of the values obtained with the data on the benchmark is done to see the relative quality

of the BC HNI 1 E- Commerce Website compared to other products. The following are the results of the benchmark process using the UEQ Data Analysis Tool.
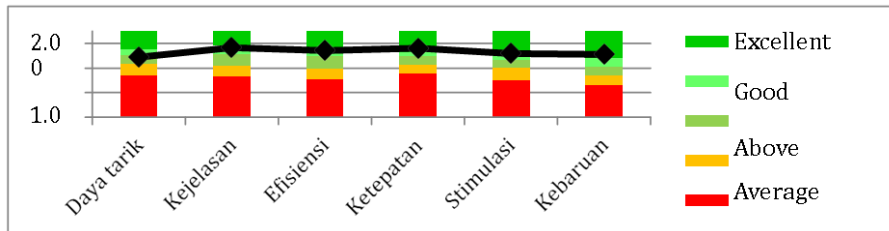
Figure 2. UEQ Scale Benchmark Results of BC HNI E-Commerce Website 1

Based on Figure 2, it can be seen that when compared to other products, the BC HNI 1 E-Commerce Website gets a good score on the aspects of clarity and efficiency, the attractiveness aspect gets a score above average. While the aspects of accuracy, stimulation, and novelty get an excellent score.

Discussion

In this study, the demographic analysis involved dividing and comparing the number of respondents by gender and age. Of the total 50 respondents who participated, 14 of them were male (28%) and 36 were female (72%). This shows that the majority of respondents are female. The age distribution analysis showed that most of the respondents (64%) were under 30 years old, while 30% were within the age range of 31-50 years old, and only 6% were above 51 years old. This indicates that the majority of respondents are young individuals.

The validity test results using SPSS version 25 show that all 26 statements tested meet the requirements with a significance value of <0.05, so all of them are declared valid. The reliability test using the Cronbach's Alpha value also showed good results with a value of 0.777, which is above the 0.6 threshold. This indicates that this research instrument has good reliability and can be used with confidence.

The attractiveness variable measures the user's overall impression of the BC HNI 1 E-Commerce Website. This variable used gets a positive evaluation value on all indicators. The clarity variable measures the ease with which users can understand and use the website, also getting positive evaluations on all indicators. The efficiency variable, which assesses the user's ability to complete tasks quickly and efficiently, and the accuracy variable, which assesses the user's control in interacting with the website, both also received positive evaluation scores. The stimulation variable, which measures user motivation and enjoyment, and the novelty variable, which assesses the level of innovation and creativity of the website, both also received positive evaluations on all indicators. Figure 13 shows that all user experience measurement variables using the User Experience Questionnaire (UEQ) get an average value above 0.8, indicating a positive evaluation level.

Based on the data obtained, the highest average value is found in the clarity variable with a mean of 1,830. On the other hand, the lowest average value is found in the attractiveness variable with a mean of 1.443. An analysis of the benchmark results shows that compared to other products, the BC HNI 1 E-Commerce Website

gets a score of "good" in the aspects of clarity and efficiency, "above average" in the aspect of attractiveness, and "excellent" in the aspects of accuracy, stimulation, and novelty. These results show that this website has excellent user experience quality in its various aspects.

4. CONCLUSION

Based on the results of the discussion that has been presented previously, the following conclusions can be drawn: This study successfully evaluated the user experience of the BC HNI 1 E-Commerce Website in each aspect of the User Experience Questionnaire (UEQ). Demographic analysis shows that the majority of research respondents are women (72%) compared to men (28%). Most of the respondents were young individuals, with 64% being under 30 years old, 30% being 31-50 years old, and only 6% being over 51 years old. The instrument test results show that the validity test shows all 26 statements are valid with a significance value of <0.05. The reliability test using Cronbach's Alpha produces a value of 0.777, which indicates that the research instrument has good reliability and can be trusted. Based on the results of data processing from 50 respondents using descriptive statistics on each attribute that measures user experience with UEQ, it is known that the BC HNI 1 E-Commerce Website gets a positive evaluation value in the attractiveness aspect with a mean value of 1.443 which is equivalent to a percentage of 72.15%, perspicuity with a mean value of 1,830 which is equivalent to a percentage of 91.50%, efficiency with a mean value of 1.710 which is equivalent to a percentage of 85.50%, dependability with a mean value of 1.815 which is equivalent to a percentage of 90.75%, stimulation with a mean value of 1.595 which is equivalent to a percentage of 79.75%, and novelty with a mean value of 1.560 which is equivalent to a percentage of 78.00%. This shows that overall, this website has provided a positive user experience in the various aspects measured. The highest rating is obtained in the perspicuity aspect with a percentage of 91.50%, while the lowest rating is in the attractiveness aspect with a percentage of 72.15%. Based on the results of the benchmark value obtained in each aspect of UEQ using the UEQ Data Analysis Tool, it is known that the attractiveness aspect with a mean value of 1.443 (percentage of 72.15%) gets an above average value, perspicuity with a mean value of 1.830 (percentage of 91,50%) and efficiency with a mean value of 1.710 (percentage 85.50%) get a good score, as well as dependability with a mean value of 1.815 (percentage 90.75%), stimulation with a mean value of 1.595 (percentage 79.75%), and novelty with a mean value of 1.560 (percentage 78.00%) get an excellent score. The highest rating is obtained in the perspicuity aspect with a percentage of 91.50%, while the lowest rating is in the attractiveness aspect with a percentage of 72.15%.

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