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Application Of User Centered Design (Ucd) Method For Ui/Ux Design At Husqy Petshop

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Abstract

The era of digital transformation has made the MSME industry in Indonesia become technology literate, one of which is Husqy Petshop. Husqy Petshop is transforming by creating e-commerce which makes transaction accessibility easier. The development of the Husqy Petshop e-commerce application must pay attention to the right User Interface (UI) and User Experience (UX) so that it can be used by users comfortably. User Interface (UI) and User Experience (UX) are two important aspects of application design that play a role in the interaction between users and products. Good UI/UX design is obtained by using a method that takes into account the appearance and user experience, one of which is User Centered Design (UCD). The Husqy Petshop application, which applies the User Centered Design (UCD) method, does not only focus on technical aspects, but also considers user needs, preferences and experience. The test results using the Single Ease Question (SEQ) method produced an average score of 6.89 which states that the appearance of the Husqy Petshop Application is easy to use.The aim of this research is to provide recommendations for interface designs that suit the needs and are easy for users to use.

Keywords : *UI/UX, User Centered Design (UCD), Husqy Petshop, and Single Ease Question (SEQ)*

1. Introduction

In the current era of digitalization, the development of information technology has had a significant impact on various sectors, including the MSME industry in Indonesia (Pratama, 2022). One of the impacts of technological developments on MSMEs is the proliferation of e-commerce. Based on data released by Databoks, it shows that the projected growth rate of e-commerce in Indonesia in 2024 will reach 30,5% (Puspita Hannah et al., 2024). This data is the data with the highest growth rate compared to countries in the world. By adopting e-commerce technology, MSMEs can expand their market reach globally through online platforms (Herlambang et al., 2023). Apart from that, easy accessibility and efficiency in the transaction process enable MSMEs to compete with large companies. Through e-commerce, MSMEs can also increase their brand visibility and reach new consumers without having to face geographic restrictions (Fitrani et al., 2023). This provides a great opportunity for MSMEs to develop their business sustainably and increase income. One of the MSMEs that is experiencing transformation is the management of the Husqy Petshop business, a place that provides various products and services for pet needs.

Husqy Petshop is one of the MSMEs operating in the trading sector. Husqy Petshop provides products and services to facilitate the needs of pets located at Siwalankerto Street No. 240, Surabaya City. The products and services offered include ordering products (food, vitamins and medicine), animal grooming schedules and animal health information. In order to meet increasing consumer demands for a shopping experience that is comfortable, efficient and not limited by distance and time, developing the Husqy Petshop e-commerce application is a strategic step. Some of the challenges currently faced by Husqy Petshop include the complexity of managing services, recording transactions and interacting with customers (Azzahra Aprillia et al., 2024). Therefore, developing the Husqy Petshop e-commerce application is the right solution. The development of the Husqy Petshop e-

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commerce application must pay attention to the right User Interface (UI) and User Experience (UX) so that it can be used by users comfortably (Nurtsani et al., 2022).

User Interface (UI) and User Experience (UX) are two important aspects of application design that play a role in the interaction between users and products (Luthfi et al., 2024). UI includes visual elements such as buttons, icons, and layout that allow users to interact with the application (Ravelino et al., 2023). Meanwhile, UX covers the overall user experience in using the application, including satisfaction, comfort, and efficiency in achieving goals (Alomari et al., 2020). These two aspects are interrelated and impact the overall quality of the application. The main benefit of a good User Interface (UI) is ease of use and navigation which increases user efficiency in finding information or completing tasks (Zahra et al., 2024). The intuitive UI design minimizes user confusion and allows them to interact with the app seamlessly. A visually appealing User Interface (UI) design can also increase the appeal of the application and increase user engagement. Meanwhile, good User Experience (UX) design creates a satisfying experience for users, which ultimately increases user retention and loyalty to the application. Good User Experience (UX) design also optimizes user efficiency in achieving their goals by providing clear workflows and smooth processes (Anggoro et al., 2021).

Good UI/UX design is obtained by using a method that takes into account the appearance and user experience, one of which is User Centered Design (UCD) (Arie Sandi et al., 2022). The User-Centered Design (UCD) method is an approach to product or system development that places the user as the main focus in every stage of the design process (Ayu Amizhora et al., 2023). This method centers on a deep understanding of user needs, preferences, and skills to create appropriate and beneficial experiences for users (Luthfi et al., 2024). In general, the User Centered Design (UCD) process takes the form of iteration, namely repetition and evaluation carried out in each process before continuing to the next process. In general, the stages in the User Centered Design (UCD) process are understanding the user context, determining user needs, design solutions and evaluation based on needs (Twomlow et al., 2022). The Husqy Petshop application, which applies the User Centered Design (UCD) method, does not only focus on technical aspects, but also considers user needs, preferences and experience.

Based on the problem description above, it is hoped that this research can see the urgency and relevance of developing the Husqy Petshop application using the User Centered Design (UCD) method. This will not only provide benefits for petshop owners in optimizing their business operations, but also increase customer satisfaction through a more personalized and efficient shopping experience.

2. Method

The method used in this research refers to the User Centered Design (UCD) method. In this research, the process steps are shown in **Figure 1** below.

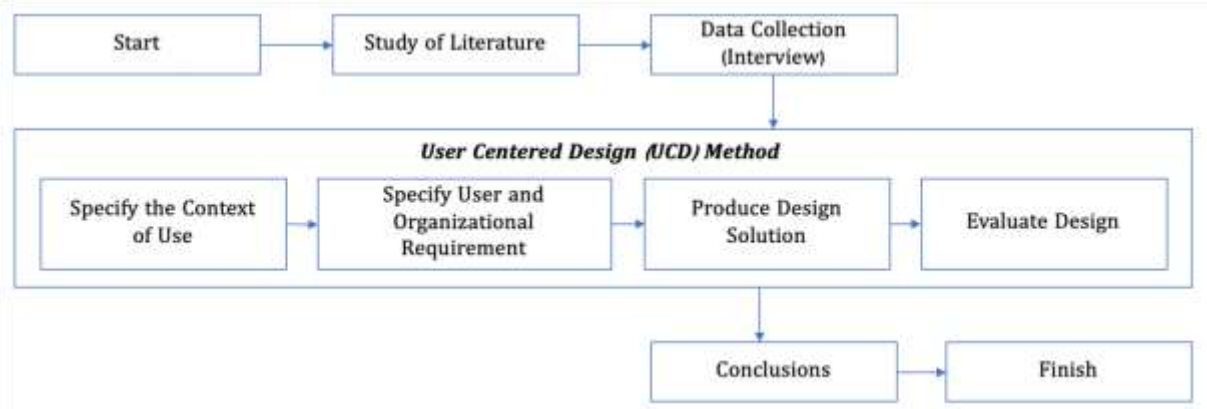

Figure 1 Flow of Research Methods
Source: Data Research

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Based on Figure 1 above, the first step in carrying out this research is a literature study. At this stage, activities are carried out to collect and study previous journals, articles and books, especially regarding ui/ux application development using the User Centered Design (UCD) method. The next stage is data collection, by interviewing Husqy Petshop. The resource person involved in this research interview was named Drh. Lakshmi Kumiati. The resource person is the owner of the MSMEs Husqy Petshop.

The next steps in carrying out research are the steps in the User Centered Design (UCD) method. These steps consist of specify context of use, specify user and organizational requirements, produce design solution and evaluate design (Jauculan et al., 2024). Specify context of use is done by collecting information from potential users to support the design of the Husqy Petshop user interface (UI/UX) (Yunanto et al., 2024). Specify user and organizational requirements is an introduction to user needs and determining the required functional details (Seagull et al., 2022). In this phase, there is a series of actions to recognize user needs by determining potential users and identifying user needs.

Produce design solutions are activities such as framework mapping, designing, and developing solution design ideas. All of these steps are based on identifying needs that have been discovered in the previous stages (Wati et al., 2024). The result of this stage is a prototype design framework which includes page structure, features and content which provides an overall picture of the Husqy Petshop application design (Alomari et al., 2020). Evaluate design is the final stage in the User Centered Design (UCD) approach, where the evaluation process is carried out to test the system and measure user convenience. The goal is that weaknesses can be identified and corrected (Ketut Sukarma, 2023). This testing focuses on the user's perspective and involves respondents testing the prototype that has been designed (Muhtar et al., 2024). The final step of this research process is to draw conclusions. This conclusion contains the entire process starting from literature study to design evaluation results.

3. Result and Discussion

In this research, the results and discussion chapters will focus on discussing the results of the User Centered Design (UCD) method process. The User Centered Design (UCD) method process includes the stages of specify context of use, specify user and organizational requirements, produce design solution and evaluate design (Groos et al., 2024).

1. Specify Context of Use

Data collection was carried out using the interview method with the owner of Husqy Petshop. The resource person interviewed in this research was Drh. Lakshmi Kumiati. The resource person is the owner of Husqy Petshop. A summary of the results of interviews with resource persons can be seen in Table 1 below.

Table 1 Summary of Resource Interviews

No	Question	Answer
1	Explain the profile of Husqy Petshop?	Husqy Petshop is located at Siwalankerto Street No. 240 Surabaya. Husqy Petshop is a business that has been established for several years with high dedication to customer satisfaction. Husqy Petshop has succeeded in winning competition in the industry as a trusted destination for pet lovers. This shop provides a variety of pet food, grooming services, veterinarians and hotel paint.
2	Has Husq Petshop's business processes implemented technology?	So far, the business process at Husqy Petshop still does not use technology. We only rely on WhatsApp chat to provide the services offered.
3	What business processes are still carried out manually?	Grooming services, as well as hotel paint monitoring, are still carried out via the WhatsApp

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		chat application. Apart from that, the payment process still does not have a system so payments are separate. But you can use cash or debit.
4	In your opinion, what features are most needed in Husqy Petshop?	I think some of the features that should be in my store are: a. Features for monitoring grooming b. Features for monitoring hotel cats, because so far the problem with hotel cats is that they still use WhatsApp groups with animal owners so they are still less effective and our complaint is that there are too many WhatsApp groups and it creates confusion. c. Apart from direct veterinary examination services, we hope we can also provide online consultation services, so that everyone can consult without being limited by distance d. Our product ordering feature so that our sales reach can be wider
5	If you create a system, how do you want it to look?	In my opinion, the appearance of the application that will be created would be better, the information must be detailed. For free colors, however, I want something feminine but still neutral to use for everyone. An example of a neutral color is using lilac

Source: Data Processing

2. Specify User and Organizational Requirement

Basically, this stage is the stage of extracting information or data to gather needs from users. After the information or data is collected, the information is organized from user needs data. Next, user needs are described in various forms or techniques, such as narratives, pictures or diagrams. In this research, data mining techniques were used for Husqy Petshop owners through understanding the user context and user needs.

1. User Context

This stage is the basis of any UCD method, namely to understand who the users of the intended product are and their usage environment. At this stage, the identify stakeholder method is carried out, with the result that the Husqy Pethsop owner becomes the system admin and becomes the policy maker and supervisor of project work from system creation to system operation. Application users are Husqy Petshop customers and staff.

2. User Needs

From the results of interviews conducted with the owner of Husqy Petshop, it can be concluded that the visual design features of the application are product ordering features, grooming features, veterinary features or online veterinarian consultations, hotel paint features and business process reporting systems (admin).

3. Produce Design Solution

At this stage, a solution design is created based on the results of identifying user needs. This design solution is divided into views from the user's point of view and from the admin's point of view. The admin display will be created using a website display while the user display will be presented in the form of a mobile application display.

a. Prototype User Interface

This user prototype display includes the initial application display features, user list, user login, main page, user profile, product and basket pages, product checkout and payment pages, hotel paint reservation page, hotel paint monitoring, online consultation and

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incoming contact. The system prototype display of all the features available to the user can be seen Figure 2 below.

Figure 2 Interface Prototype User
Source: Data Processing

b. Interface Prototype Admin

This admin prototype display includes admin login display features, admin dashboard, product master page, order master page, online consultation chat, and transaction master page. The system prototype display of all the features in the admin can be seen in Figure 3 below.

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Figure 3 Interface Prototype Admin

4. Evaluate Design

At this stage, the design that has been created is evaluated for user evaluation. At this stage, evaluation and improvement of the design that has been made will be carried out (Herlambang et al.,2024). This stage includes prototype evaluation, prototype improvement and testing using a Single Ease Question (SEQ).

a. Evaluate Prototype

This evaluation process results from showing the application interface design to application users. The results of the prototype evaluation can be seen in table 2 below.

Table 2 Evaluate Prototype Design

No	Problems	Respondents
1	In the inbox menu, it is better to create a chat room for hotel paint services and online consultations only. Information about promos is included in the payment menu at checkout.	Owner
2	The successful payment notification display is a waste. If the payment is successful, the order status will immediately go to order history or inbox.	Owner
3	In the admin display of the transaction master menu there is a data search feature. It is better to change the filter by date to make it easier to print reports per day, month or year.	Owner

Source: Data Processing

b. Prototype Improvement

This prototype improvement process was produced by revising the interface design that had been created. The appearance of the prototype improvements for the user page can be seen in Figure 4 below.

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Figure 4 User Design Prototype Improvements
Source: Data Processing

Changes to the user's appearance also affect the admin's appearance. The revision of the admin display can be seen in Figure 5 below.

Gambar 5 Admin Design Prototype Improvements

c. Testing

At this stage, prototype testing was carried out using the Single Ease Question method. In this testing stage, the researcher interviewed 2 respondents, then asked them to try the tasks set by the researcher for each feature of the prototype. The results of data processing from testing are presented on a Likert scale of 1 to 7. The results of testing can be seen in table 3 below.

Table 3 Prototype Design Testing Results

Task	Respondents		Average
	Owner	Customer	
T1	7	7	7
T2	7	7	7
T3	7	7	7
T4	7	7	7
T5	7	6	6,5
T6	7	7	7
T7	7	7	7
T8	7	6	6,5
T9	7	7	7
Rata-Rata SEQ			**6,89**

Source: Data Processing

Table 3 shows the results of testing the single ease question for 2 respondents which resulted in an average score of 6.89. This means that the score states that the appearance of the Husqy Petshop Application is easy to use.

4. Conclusions and Suggestions

The conclusion that can be drawn from this research is that the results of interviews have found an analysis of user needs which produces 4 application features, namely product ordering features, grooming services, hotel paint services, online veterinarian consultations

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and a business process reporting system (admin). Prospective users of this application are Husqy Petshop owners and customers. Next, a prototype was designed, an evaluation of the prototype was carried out and three problems were found. Of these three problems, improvements or problem solving were carried out in the form of solution designs. Testing uses a Single Ease Question which is carried out by giving assignments or experiments on application features to test how easy the application can be used. The average SEQ score is 6.89, which states that the appearance of the Husqy Petshop application is easy to use.

Suggestions for future research are to use other UI/UX approach methods. Next, the results can be compared between User Centered Design (UCD) and other approach methods and determine which of the two is better. So that it can provide recommendations to future researchers to use more efficient approach methods.

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