

# Enhance the User Interface Design of the booking application at Rana Photo Studio by applying the User-Centered Design (UCD) method

Putri Nuria<sup>1</sup>, Ellyv Septiana E.P<sup>2</sup>, Ayin Dewi Safitri<sup>3</sup>, Solehatin<sup>4\*</sup>

<sup>1,2,3</sup> Teknik Informatika. Sekolah Tinggi Ilmu Komputer PGRI Banyuwangi

<sup>4</sup> Managemen Informatika. Sekolah Tinggi Ilmu Komputer PGRI Banyuwangi

ayind7523@gmail.com, ellyvputri@gmail.com, puputrii262@gmail.com, atin33@yahoo.co.id

Received December 28<sup>th</sup>, 2023

Accepted January 16<sup>h</sup>, 2024

**Abstract**— In the era of advancements in information technology within the business sector, it is expected that business professionals adapt their product marketing strategies to meet customer expectations. For instance, photo studio booking applications have transformed the way customers interact with the service, making the booking process more efficient and allowing customers to make reservations from anywhere and at any time.

Through these applications, customers can place orders without the necessity of visiting the studio physically, accessing services via the company's provided website. Before the prevalence of online ordering, users typically placed orders via electronic mail or social media platforms like WhatsApp and Instagram, often with less detailed information. Therefore, the importance of developing more sophisticated ordering methods becomes imperative.

Good UI design is not only aesthetically appealing but also stimulates customer interest to explore more about the company. Likewise, a positive user experience fosters customer loyalty, creating a favorable impact on the business. By implementing the User-Centered Design (UCD) method, photo studio booking applications can gain a deeper understanding of their customers' needs and preferences, ultimately leading to increased customer satisfaction and effective resolution of potential user problems on the website. The adoption of online booking systems has completely revolutionized the way the creative industry operates, resulting in significant changes in discovering, booking, and managing photo studios.

**Keywords:** *Information System; UI/UX; User-Centered Design (UCD); Online Booking; User Interface Design.*

## I. INTRODUCTION

As information technology continues to advance, businesses must adapt their marketing strategies to reach their clients. For instance, a photo studio

booking application allows clients to access the company's website instead of physically visiting the studio. This means that clients can now place their orders and make purchases online. The photo studio booking application is a service-based business that provides photography and videography services for couples, pre-wedding shoots, candid shots, school photos, and family albums. Previously, clients would have to make orders for photo and portfolio services through email or social media platforms such as WhatsApp and Instagram, where the information provided was often incomplete.[1]

Online ordering is a convenient system that allows customers to make reservations quickly and easily from anywhere, at any time. This system overcomes the problem of difficulties in ordering by providing a precise and accurate information system, which can be accessed directly by users. UI/UX is the acronym for User Interface and User Experience. It refers to the visual display and digital marketing tool of mobile applications or websites. UI or User Interface is the process of designing a website or application, which includes buttons, text, images, input fields, and other elements that are directly related to users. UX or User Experience, on the other hand, is the person responsible for creating the product and visualizing the user flow into a product whose suitability has been tested. [2]

The importance of user interface (UI) design in capturing customer interest in company information is emphasized. Good UI design encompasses the aesthetic value of product displays, motivating customers to explore more about the company. Through an appealing interface design, the photo studio booking application can instill new habits in users, facilitating a clearer understanding of the ordering process through to payment. Similarly, with UX, which aims to increase business value and profits.

A positive user experience will foster customer loyalty, yielding a positive impact on the business. In conclusion, designing the UI interface and UX user experience in the photo studio booking application is crucial to ensure service quality and meet customer needs. [3]

Adopting the User-Centered Design (UCD) method can help photo studio bookings better understand their customers' needs and preferences. This understanding can lead to the creation of products that align with customer expectations, ultimately increasing client satisfaction. The use of the User-Centered Design (UCD) approach can significantly impact UI/UX design. By adopting this method for the UI/UX design process of booking shutter photo studios, it becomes possible to address the needs and resolve user issues that were previously identified on the website. This approach will ensure that the website is easy to use and navigate, providing clear instructions to users for seamless operation.[4]

Website-based applications have revolutionized the way we interact with various services, especially in the entertainment and creative industries. These applications offer user-friendly interfaces that make it easy for users to access different menus. One of the most notable developments in this field is the emergence of website-based photo studio booking applications. This app has brought significant changes to the way recording studios, photography studios, and other creative venues are discovered, booked, and managed. This literature review will highlight the crucial role of website-based applications in facilitating the studio booking process. It will explore the key benefits offered by such applications, discuss the latest industry developments, and explain the challenges associated with their use.[5]

Online booking is a convenient system that allows customers to make reservations quickly and easily from anywhere, at any time. This system eliminates the problem of booking difficulties by providing a precise and accurate information system that can be accessed directly by users. The User Interface (UI) refers to the design and layout of a website or application. It encompasses all the visual components that users interact with, including the arrangement of display elements, color schemes, buttons, and fonts. A well-designed UI can significantly enhance user engagement and interest in the website or application.[6]

Borrys Hasian defines user experience as a range of different aspects. Out of these, UX is a team of professionals that work on user flow in applications and on the web to cater to the user's needs and make their experience smoother. UX designers possess the knowledge of how users interact with websites or applications, and they should know how to create wireframe or mockup designs, which is one of the basic requirements for UX work.[7]

UCD is a system development method that prioritizes the role of the user in each stage of the development process, with a focus on user experience. This approach involves developing the system in a way that aligns with the user's experience and outcomes. Another way to describe UCD is as a process of creating a system by incorporating the user's perspective into the development process to ensure the system functions and interacts in a way that is intuitive to the user. [8]

Using the User-Centered Design (UCD) method can assist photo studios in understanding customer needs and enhancing customer satisfaction. By incorporating UCD into the UI/UX design process for the photo studio booking application, we can address previously identified user issues on the website. This ensures that the website is user-friendly, provides clear instructions, and offers a seamless ordering experience.[9]

The photo studio booking application enables customers to place orders without visiting the studio in person. Previously, photo service orders were placed through electronic mail or social media, often with limited details. This challenge emphasizes the necessity for improved user interface (UI) design in photo studio booking applications.[10]

The implementation of online booking systems has revolutionized the way studio services are accessed, particularly in the creative industry. Website-based applications for photo studio bookings bring about significant changes in discovering, booking, and managing creative studios. In this literature, we will underscore the crucial role of website-based applications in facilitating the studio booking process, elucidate the key benefits they provide, discuss recent industry developments, and elaborate on the challenges associated with their utilization.[11]

## II. METHOD

The first stage of a design project is planning. This involves user involvement in requirements elicitation, design evaluation, and addressing technical aspects. The visual aesthetics of the online booking process, a crucial element on the website, have a significant impact on user habits. The goal is to create a realistic appearance, enabling users to adapt easily and providing flexible features based on user needs.

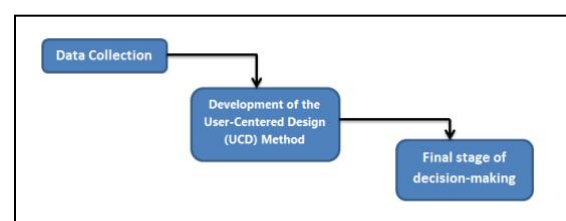


Fig. 1. Research Framework

A. Data collection

Observations are made to collect data for system upgrades and adjustments.

1) Identifying problems

Conduct observations to identify problems and needs related to the booking system created by Rana Studio. Only a maximum of 5 people should be involved in this process. Data will be collected by conducting interviews to determine the issues and requirements related to the user's experience while using the application.

Below is a list of interview questions that will focus on the booking display wireframe design. :

- a) Are the features in the booking display understandable for users?
- b) Is there anything that might make it difficult to place an order during the booking process?
- c) Are there any areas of the booking process that could use improvement or addition?
- d) Do the ordering instructions meet your requirements?
- e) Do you comprehend the functionalities presented in the dashboard and booking section?

List of interview questions" (Testimonial display wireframe design) :

- a) Could users comprehend the features that have been offered?
- b) Could you please inform me whether the user faces any issues while entering the data?
- c) Could you confirm if the feature is easy for users to comprehend?

List of interview questions (Dashboard display wireframe design) :

- a) Is the information displayed on the dashboard easy to understand and communicate?
- b) Could you confirm if the dashboard display looks visually appealing?
- c) Is it easy for users to learn and utilize the provided features?

2) The study of literature

Literature review is a crucial stage in understanding the User Centered Design (UCD) method, which supports each process and involves researching previous studies related to UCD.

B. UCD Method Development

Research at this development stage uses the User Centered Design (UCD) method. The processing time

used in this research is as long as the Scientific Research Methods course takes place.

1) Understand the stage of the User-Centered Design (UCD) Method.

The next step involves identifying the user context, which includes conducting interviews to determine who is directly involved in the system.

The following are the results of the identification carried out:

- a) This application is for adults who want to order a photo studio
- b) The interview was conducted, reflecting the characteristics of the source like this:
  - i. The number of speakers was 5 people.
  - ii. Age : 19-30 years.
  - iii. Gender: 2 women, 3 men.

2) Specify user requirements stage.

Based on several questions asked during interviews with various sources, conclusions were drawn regarding user needs concerning the features found in several Rana Banyuwangi studio booking applications as follows:

Requirements Before Evaluation	Requirements After Evaluation
a. The features used are challenging for users to comprehend.	a. The features used are easy for users to understand.
b. Finding information regarding bookings is too difficult.	b. Finding information regarding bookings is not too difficult.
c. The appearance tends to be monotonous	c. The appearance that attracts users.

C. The Design Solution Stage.

In this process, a design is executed, starting from sketching each page or section of the application in the form of a low-fidelity wireframe. The final result of this interface design is a design prototype in the form of a high-fidelity wireframe.

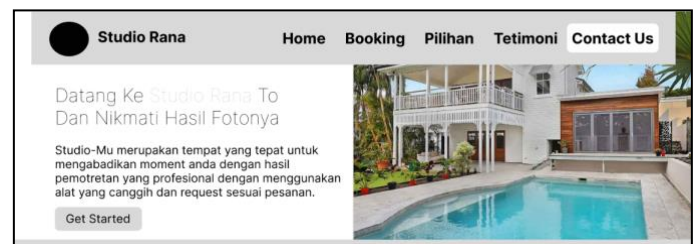


Fig. 2. Dashboard Display Wireframe Design

In Figure 2, the initial display menu is presented, providing information to facilitate customers in accessing the presented information. The display includes a navbar, offering various menu options for customers, such as Home, Booking, Testimoni, and Contact Us. We designed the application to ensure ease of understanding for customers.

Fig. 3. Booking Display Wireframe Design

In Figure 3, the Booking display is shown. On this page, there are input fields for name, address, cellphone number, and description. Customers are required to fill in this information for the package they will choose later. Once the input has been filled in, customers can click on "Booking," and the data will be sent.

Fig. 4. Testimonial Display Wireframe Design

Pada Gambar 4 adalah tampilan dari Testimoni. Dimana testimoni ini merupakan komentar yang harus diisi oleh customers untuk meningkatkan rating aplikasi kami. Pada halaman testimoni ini juga terdapat inputan berupa nama, judul dan isi.

#### D. Evaluation Against Requirements

The evaluation process is conducted to ascertain the suitability of the user interface design of this application for the users' needs and preferences. It also determines whether to proceed to the next stage (final stage) or to revisit the processes at the previous stage in case of any misalignment with the user's requirements. The evaluation process may be repeated multiple times if the initial evaluation leads to a decision to revisit the preceding stages. It involves conducting prototype trials, actively engaging users of the Photo Studio Booking application at Rana Studio.

### III. RESULT AND DISCUSSION

#### A. Data collection

The data collection process through interviews with five users involved direct interaction to obtain rich and contextual information. Through structured questions, we gained in-depth insights into each individual's unique experiences and perspectives on the product or service under investigation. The following are the answers from interviews the author conducted with five users.

TABLE I. BOOKING

No	Questions	Yes	No
1	Is it possible for users to understand the features in the booking display?	3	2
2	Do users encounter issues when inputting data?	0	5
3	Is there a need to improve or add any processes to the booking procedure??	1	4
4	Do the ordering steps suit your needs?	4	1
5	Do you understand the features in the dashboard and booking section?	5	0
Total Number		13	12

Thirteen answers indicated "yes" out of five questions. On average, users found it easy to understand the provided booking features and encountered no issues when adding data. Users expressed that there was no need for improvement in the booking process, and they believed all features met their needs.

List of answers to interview questions (Booking display wireframe design):

- On average, three out of five users think that understanding the booking features presented in the booking display is easy.
- On average, five users found no problems and felt the booking process was made easy.
- On average, 4 out of 5 users feel that updates in development or features are sufficient, and there is no need for further changes and updates.

- d) Four out of five users in the booking process steps found it very helpful in entering data and adapting to customer needs.
- e) Five users felt that it was easy to find information about bookings, and it was also easy to find information on the dashboard.

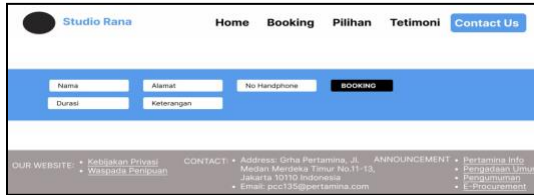


Fig. 5. Booking Final Display Design

In Figure 5, the Booking display is presented. On this page, there are input fields for name, address, cellphone number, and description. Customers are required to fill in this information for the package they will choose later. Once the input has been filled out, customers can click on "Booking," and the data will be sent.

TABLE II. TESTIMONIAL

No	Questions	Yes	No
1	Do users of the testimonial table feel that it is possible and easy?	5	0
2	Are there any problems in filling in the data in the testimonial table?	0	5
3	Is there any change to the testimonial filling feature?	5	0
Total Number		10	5

Ten affirmative answers out of three questions indicate that users find it easy, encounter no obstacles in ordering, and appreciate all the testimonial features.

List of interview questions (Testimonial display wireframe design):

- a) Five users experienced ease when filling out testimonials.
- b) Five users felt that, on average, there were no problems when inputting data.
- c) On average, five users in the testimonial filling feature section want the title to be removed as they consider it not too important to include.



Fig. 6. Testimonial Final Appearance Design

In Figure 6, there is a display of the Testimonial. These testimonials are comments that customers must fill in to enhance the rating of our application. On this testimonial page, there is also input in the form of name, title, and content.

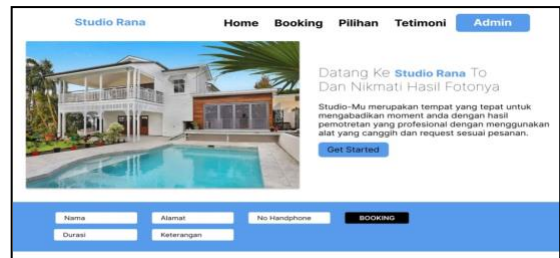
TABLE III. DASHBOARD

No	Questions	Yes	No
1	Do users understand the features that have been provided?	4	1
2	Is the dashboard display attractive to look at?	4	1
3	Do users easily learn the features provided?	3	2
Total Number		11	4

11 answers to 3 questions: users feel they understand and can learn the dashboard features provided.

List of interview questions (Dashboard display wireframe design):

- a) Four out of five users find it easy to comprehend the conveyed information.
- b) Four out of five users feel that it is better for the image to be on the left because it is more comfortable for the user to look at and easier to



understand.

- c) On average, three out of five users feel that it is easy to learn the features on the dashboard display.

Fig. 7. Dashboard Final Appearance Design

In Figure 7, the initial display menu is presented, providing information to facilitate customers in accessing the presented information. In this display, there is a navbar with several menu options that

customers can utilize. The menus include Home, Booking, Testimonial, Options, and Contact Us. We designed the application to ensure ease of understanding for customers.

#### IV. CONCLUSION

Based on the results of the above data collection, it is concluded that the UI/UX display designed by the team is well-received by users. The average user comprehends the features presented by the author. By considering these aspects, the UI/UX design for the photo studio booking application can provide a satisfying user experience. The UCD method has been applied in implementing the UI/UX of this website-based shutter photo studio booking application, aiding customers in obtaining information about studio photos and the booking process, as indicated by the research results.

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