

## User Interface Design and User Experience Evaluation of the 3R Klakah Animal Feed Shop Website Using the Design Thinking and System Usability Scale Method

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### ABSTRACT

The development of information technology encourages businesses to adopt digital systems to improve service quality and information delivery. However, Toko Pakan Ternak 3R Klakah still relies on conventional sales and promotion methods, causing difficulties in product information access and limiting promotional reach. This has a look at aims to lay out an internet site prototype interface using the design thinking method and evaluate its usability using the System Usability Scale (SUS). The prototype was designed using Figma and tested on respondents through SUS questionnaires. The evaluation results obtained an average SUS rating of 86, classified as notable and acceptable. Those scores indicate that the designed website prototype has good usability, is easy to use, and provides a positive user experience for users. Therefore, the developed prototype is expected to support product information delivery and improve customer convenience in accessing livestock feed product information.

Keywords: Design Thinking, System Usability Scale, User Experience, User Interface.



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### INTRODUCTION

The fast improvement of record-keeping technology has significantly influenced diverse sectors, which include trade and business services. The implementation of web-based systems enables businesses to distribute product information more efficiently, expand promotional reach, and improve customer interaction. Currently, websites are widely used not only by large companies but also by small and medium enterprises to support their business activities.

Toko Pakan Ternak 3R Klakah is a livestock feed store that still conducts its business activities conventionally. Based on observations and interviews with the store owner, the average number of customers visiting the store daily is approximately 20 people and may reach up to 70 customers during certain periods, although such conditions rarely occur. Customers must come directly to the store to obtain product information and conduct transactions. This condition limits customers who

live far from the store from accessing information regarding available livestock feed products. In addition, the store has not utilized digital media optimally as a promotional platform.

User Interface (UI) and User experience (UX) are essential aspects in designing an internet site system because they affect usability and user satisfaction. A good UI/UX design can improve user convenience, efficiency, and interaction quality when using a system. Therefore, designing a website based on user needs becomes an important factor in creating a usable system.

Several previous studies have implemented the design thinking approach in UI/UX layout. Research conducted by Mustajib et al. (2023) showed that Design Thinking effectively assists in designing website interfaces based on user needs. In addition, studies by means of Pratama et al. (2024) showed that the System Usability Scale (SUS) method successfully measured website usability with a SUS rating of 82, categorised as excellent.

Based on those problems, this study aims to design and examine a website prototype for Toko Pakan Ternak 3R Klakah using the design questioning approach and the Usability Scale (SUS). The predicted result of this study is a website prototype with true usability and suitable for customers' wishes.

## **THEORETICAL FRAMEWORK AND HYPOTHESES**

User Interface (UI) and User Experience (UX) are vital factors in website development because they influence usability, accessibility, and user satisfaction. UI focuses on the visual appearance and interaction elements of a system, while UX emphasizes user experience when interacting with the system. A well-designed UI/UX can improve user convenience, efficiency, and effectiveness in accessing information through a website.

This observation makes use of the layout questioning technique as the main technique in designing the website prototype. Design questioning is a person-targeted design approach that emphasizes expert user wishes and fixing problems creatively and systematically. The method includes five stages: empathize, define, ideate, prototype, and test. Through those degrees, designers can discover consumer troubles, develop appropriate solutions, and evaluate the designed prototype based on user feedback.

The usability evaluation on this takes a look at using the System Usability Scale (SUS) technique. SUS is a usability checking method that consists of 10 questionnaire items using a Likert scale. This method is widely used because it is simple, efficient, and capable of producing reliable usability scores. The SUS evaluation helps degree user perceptions regarding the ease of use and overall usability of the evolved website prototype.

This study focuses on designing and evaluating a website prototype for Toko Pakan Ternak 3R Klakah. Therefore, no statistical hypothesis is formulated. The evaluation process focuses on measuring the usability level of the prototype based on user responses using the System Usability Scale (SUS) method.

## **METHODS**

This study uses a design research approach focusing on the development of a website prototype for Toko Pakan Ternak 3R Klakah. The study adopted the design wondering method as the principal framework for designing the user Interface (UI) and user experience (UX) of the website. Data were accrued through observations, interviews, and questionnaires to identify user needs, business

process conditions, and problems related to product information delivery and promotion activities at the livestock feed store.

The design thinking method includes five stages: empathize, define, ideate, prototype, and check. The empathize stage was conducted through direct statements and interviews with the store owner and customers to understand user needs and problems. The define stage focused on identifying and formulating the main problems experienced by users. The ideate stage generated ideas and solutions related to website features, navigation structures, and interface concepts. The prototype stage transformed the design concepts into an interactive website prototype using Figma.

The resulting prototype includes several main features such as homepage, product list, product detail page, buying cart, checkout page, contact page, customer dashboard, and admin dashboard. The prototype was designed with a focus on usability, simplicity, and user convenience in accessing product information.

Usability assessment was carried out the usage of the system Usability Scale (SUS) approach. The evaluation concerned 30 elderly respondents between 17 and 50 years who were asked to use the prototype and complete a SUS questionnaire consisting of 10 statements. SUS rating calculation accompanied widespread scoring procedures by way of converting respondent solutions, summing all converted ratings, and multiplying the entire rating by 2.5 to obtain the final usability score. The evaluation results were then interpreted based on SUS usability categories ranging from unacceptable to excellent.

## RESULTS AND DISCUSSION

The implementation results show that the website prototype for Toko Pakan Ternak 3R Klakah was successfully designed using the design thinking technique. The prototype was developed as a web-based interface to support product information delivery and improve customer convenience in accessing livestock feed product information. The resulting prototype provides several main features, including a homepage, product listing, product element web page, shopping cart, checkout page, contact page, customer dashboard, and admin dashboard.

The prototype design focused on simplicity, usability, and ease of navigation. The homepage displays store information, promotional banners, and navigation menus that help users access website features more efficiently. The product pages provide product images, descriptions, and price information, while the shopping cart and checkout pages support users in managing product orders more effectively. The admin dashboard was designed to support product management and information updates.

**Table 1. Prototype Feature Description**

No	Feature	Function
1	Homepage	Displays store information and website navigation
2	Product List Page	Displays available livestock feed products
3	Product Detail Page	Displays detailed product information
4	Shopping Cart	Stores select products before checkout
5	Checkout Page	Supports the product ordering process
6	Contact Page	Displays store contact information
7	Customer Dashboard	Displays customer activity information
8	Admin Dashboard	Manages products and website information

Source: processed by the authors (2026)

Before the prototype was designed, customers had to visit the store directly to obtain product availability information and conduct transactions. Product promotion activities were also still limited to conventional methods. After the website prototype was developed, users were able to access livestock feed information digitally through the website interface. Customers can browse product categories, view product details, and contact the store more easily through the provided contact features.

The usability assessment was performed using the system Usability Scale (SUS) technique with 30 elderly respondents aged 17 to 50 years. Respondents have been asked to apply the prototype and complete a SUS questionnaire consisting of 10 statements. The assessment aimed to assess usability, ease of use, and consumer satisfaction concerning the developed prototype.

**Table 2. System Usability Scale (SUS) Evaluation Results**

No	Evaluation Aspect	Result
1	Number of Respondents	30
2	Number of SUS Statements	10
3	Average SUS Score	86
4	SUS Category	Excellent
5	Acceptability	Acceptable

Source: processed by the authors (2026)

The SUS evaluation results show that the website prototype obtained an average score of 86, categorized as excellent and acceptable. The results indicate that users were able to understand the website navigation easily and interact with the provided features without significant difficulties. Users also considered the interface design clear, simple, and comfortable to use.

The high SUS rating indicates that the designed prototype successfully fulfilled usability elements such as effectiveness, efficiency, and consumer satisfaction. The prototype is taken into consideration capable of helping product statistics delivery and improving purchaser interaction with the livestock feed keep gadget. Further, the implementation of the design thinking method helped produce a user-centered design that matched user needs identified during the observation and interview stages.

Nevertheless, this study still has several limitations. The prototype developed in this study has not yet been implemented as a fully functional web-based system integrated with a database and online transaction features. In addition, the usability evaluation involved a limited number of respondents and focused only on usability measurement using the SUS method. Future studies are expected to develop the prototype into a real system implementation and add additional features such as online payment systems and shipment tracking services.

## CONCLUSION

This study successfully designed and evaluated a website prototype for Toko Pakan Ternak 3R Klakah using the design thinking and system Usability Scale (SUS) techniques. The design thinking method helped become aware of user desires and problems via the levels of empathize, outline, ideate, prototype, and test, resulting in a consumer-centered website interface design. The developed prototype consists of numerous predominant features together with the homepage, product listing, product element page, shopping cart, checkout page, contact web page, purchaser dashboard, and admin dashboard.

The usability assessment using the system Usability Scale (SUS) approach received a mean score of 86, categorized as excellent and acceptable. These results indicate that the designed prototype has

good usability, is easy to use, and provides a positive user experience for users. Therefore, the website prototype is considered capable of supporting product information delivery and improving customer convenience in accessing livestock feed product information digitally. Nevertheless, this study still has limitations because the prototype has not yet been implemented as a fully functional website integrated with a database and online transaction system. Future studies are expected to develop the prototype into a real implementation system and add additional features such as online payment systems, shipment tracking, and broader usability evaluations involving more respondents.

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