

# UI/UX Design for E-Commerce for Sesaot Village Using Figma and the User-Centered Design (UCD) Method

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## ABSTRACT

The swift expansion of e-commerce demands accessible digital platforms; nevertheless, numerous current applications lack intuitiveness, leading to an unsatisfactory user experience. This study creates a UI/UX for an online shopping platform utilizing Figma and the User Centered Design (UCD) approach to fulfill user requirements. This research aims to offer a structured method for creating e-commerce interfaces that improve user satisfaction. The techniques employed consist of user research, specification of requirements, development of prototypes, and testing for usability. The outcome is a model of an e-commerce site featuring a user-friendly interface that showcases an impressive System Usability Scale (SUS) score. Users mentioned a greater simplicity in usage and contentment, suggesting the success of the UCD method. In summary, utilizing UCD with Figma effectively created an interface that fulfills user requirements and boosts engagement.

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## 1. INTRODUCTION

The rapid global growth of e-commerce continues to reshape digital economies and consumer behavior. Recent studies report that online retail expansion is driven by increased mobile penetration, streamlined digital payment systems, and shifting user expectations toward more efficient online shopping experiences [1], [2]. Research consistently shows that user interface (UI) and user experience (UX) design play a critical role in determining customer satisfaction, purchase intention, and platform trustworthiness within e-commerce ecosystems [3]–[5]. Poor usability, unclear navigation, or inefficient checkout flows significantly contribute to high cart abandonment rates and reduced transaction completion [6], [7].

To address these challenges, user-centered design (UCD) has become a widely adopted framework in digital product development. UCD emphasizes deep involvement of users throughout the design lifecycle to ensure that system functionality aligns with real user needs and contextual constraints [8], [9]. Studies have shown that UCD-driven platforms yield higher usability performance, improved task efficiency, and stronger user engagement across various digital services, including e-commerce and public-sector systems [10], [11]. The UCD framework defined in ISO 9241-210 remains one of the most authoritative guidelines for designing intuitive human–computer interactions.

Alongside methodological improvements, advances in digital prototyping tools such as Figma have strengthened collaborative design processes and accelerated iterative development. Recent research highlights Figma's effectiveness in enabling real-time teamwork, rapid prototyping, cross-platform interface visualization, and usability testing integration within a single environment [12]–[14]. These capabilities make Figma particularly suitable for designing inclusive digital interfaces for communities with varied technological backgrounds, such as rural or developing regions.

Rural digitalization studies further demonstrate the importance of context-sensitive design, especially in local commerce environments where technological adoption remains limited. Prior research finds that integrating UI/UX principles into rural e-commerce platforms improves seller visibility, reduces operational errors, and increases buyer trust [15], [16]. However, many rural regions still depend on manual or semi-digital systems such as social media messaging, which lack structured catalog management, real-time inventory, and coherent transactional flows.

Recognizing these gaps, this study aims to develop an e-commerce UI/UX design for Sesaot Village by applying the User-Centered Design methodology and implementing iterative prototyping through Figma. This research seeks to produce an interface that aligns with local user behaviors, supports administrative efficiency, and enhances the overall shopping experience for tourists and general consumers. Furthermore, the study contributes to ongoing discussions on digital empowerment in rural communities by demonstrating how structured UCD processes can address real contextual problems and produce usable, scalable design solutions.

## 2. METHODS

This segment describes the approach employed in creating the UI/UX design for a basic e-commerce site for Sesaot Village, utilizing the User-Centered Design (UCD) method and Figma as the primary prototyping instrument. The aim is to guarantee that the system assists both local product sellers (like traditional food merchants, craft artisans, and farmers) and consumers (visitors and buyers) in executing online transactions effectively, seamlessly, and comfortably.

The research and development process followed the User-Centered Design framework outlined in ISO 9241-210. The method expanded these principles into four connected and repeating stages. It began with understanding the context in which users operate. It continued with identifying and clarifying user needs. It then moved to generating and refining design solutions. It concluded with evaluating those solutions against the defined requirements to ensure they aligned with user expectations.

Understanding the Context of use in this initial phase, researchers carried out a contextual analysis to determine who the system's users will be, their reasons for using it, and the circumstances under which they will utilize it. The objective was to collect detailed information on actual user requirements, actions, and difficulties within the current system.

**Stakeholder Interviews:** We spoke with local business proprietors in Sesaot Village, including snack sellers, herbal beverage makers, and managers of village cooperatives, to gain insight into their sales methods, issues with the existing catalog display, and challenges in processing orders manually.

**User Observation:** Researchers monitored how customers (mainly tourists or local shoppers) engage with vendors—either in person or through WhatsApp/Facebook. These exchanges tend to be sluggish, disorganized, and necessitate ongoing dialogue about product availability and pricing.

The system involves two primary user groups, administrators such as vendors or cooperative members, and customers including clients or tourists. Most interactions rely on mobile phones as the main device for communication and transactions. The current workflow depends heavily on WhatsApp messaging and face-to-face exchanges. Several issues arise from this setup. Customers cannot view real-time inventory or verify product availability. Sellers must manually record and describe each product, which increases workload and the risk of errors. The absence of a proper digital catalog and an integrated payment mechanism further limits efficiency and usability.

### 2.1. Specifying User Requirements

This phase sought to convert contextual insights into both functional and non-functional requirements for the system. User stories were developed and feature expectations assessed through interviews and questionnaires.

Table 1. Identified User Roles

User	Role Description
Admin	Manages product catalog, updates stock, views order history, confirms transactions

Table 2. Functional Requirements

Admin Features	Buyer Features
Add/Edit/Delete products	Browse product catalog
Manage order history	Filter by category or price
View user info and activity	View product details with photos and descriptions
Generate sales reports	Add products to cart
Manage payment status (manual entry)	Proceed to checkout and submit payment information

The non-functional specifications focus on creating an adaptive interface that works smoothly on mobile and desktop. The design uses simple navigation and clear symbols to help users move through the system without confusion. The typography remains easy to read and the color choices stay friendly and consistent. The overall interaction keeps the learning effort low so users with limited digital experience can use the system with confidence.

## 2.2. Producing Design Solutions

This phase involves creating the actual system solution according to user requirements and confirmed personas. Figma was utilized consistently for visual wireframing, prototyping, and collaborative evaluation.

A. User flow was created for two essential processes:

- Incorporation of Login/Register Process
- Shopping and Payment Process
- Every user flow details the series of actions a user needs to follow to accomplish tasks, making sure the route is coherent and meets user expectations. For instance, newcomers are required to sign up using their full name, email address, and password, and afterwards, they are directed to the homepage

B. Wireframes and Mockups

Initial low-fidelity wireframes were designed for the primary screens.

Table 3. Initial Low-Fidelity Wireframes

No	Website part
1	Main Page
2	Product display page
3	Product information page
4	Shopping cart and payment page
5	Screens for logging in and registering
6	Control panel for administrators

Following feedback, high-fidelity prototypes were developed in Figma, incorporating.

Table 4. High-Fidelity Prototypes

No	Feedback
1	Color scheme: main hue (green – representing freshness and reliability), subtle backgrounds (white, light gray)
2	Typeface: Poppins for both headings and body copy (contemporary yet professional)
3	Button design: rounded edges, purple or green for main actions.
4	Icons: utilized for navigation, shopping cart, user profile, and filtering options

C. Prototyping

Employing Figma’s Prototype function, interactive prototypes were created to mimic genuine interaction:

Table 5. Prototype function

No	Figma’s Prototype function
1	Navigating between pages
2	Effects on hover and subtle interactions
3	Validation of input for forms (email, password discrepancies)
4	Modal presentation for cart and login state

### 2.3. Evaluating the Design Again

The last phase included usability testing to confirm if the design solutions addressed user requirements. Testing included five users from the intended demographic, each tasked with performing simple activities on the prototype. The usability test covers several key scenarios. Users create an account and browse products by category. They add an item to the cart and complete the purchase. They check the payment instructions to confirm the next steps. Administrators sign in and update an existing product listing to ensure the management workflow runs smoothly.

The usability study used three instruments. Testers accessed the Figma prototype through its shared link. Sessions ran on Google Meet for screen sharing and observation. After each session, participants completed a System Usability Scale survey. The tasks reached a 95 percent completion rate. Several issues appeared. The filter icon confused users, so it was replaced with a clear label. Checkout instructions felt unclear, so inline guidance was added. The average SUS score reached 86.0, which placed the system in the excellent category. After the evaluation, several improvements were applied. Contrast levels were adjusted to increase visibility. Call to action buttons on mobile screens were enlarged. The admin dashboard menu was reorganized to improve access and reduce navigation effort.

## 3. RESULTS AND DISCUSSION

In this section, the results of the research are explained and, at the same time is given a comprehensive discussion. Results can be presented in figures, graphs, tables, and others that make the reader understand easily. The discussion can be made in several sub-chapters. It is strongly suggested that comparison with results from other published articles are provided to give more context and to strengthen the claim of novelty.

### 3.1. User Interface Output

The UI/UX design deliverables included multiple key screens, designed in Figma, taking into account usability, responsiveness, and accessibility. The buyer interface includes a homepage that presents featured products, clear categories such as herbal drinks and snacks, and a simple search bar. The product list appears in a grid with filters for category and price. Each product page shows images, price, a short description, seller information, and an Add to Cart action. The cart and checkout page displays item details and the total cost through a straightforward form. The login and registration screen uses a clean layout with clear validation feedback. Administrators access a control panel that lets them manage products through add, edit, and delete actions. They review orders through a summary of recent purchases, customer information, and payment checks. They also download basic sales reports. A style guide keeps the visuals consistent. The main color uses green to reflect vitality and farming. Orange highlights important actions. The typeface uses Poppins for clarity. Buttons appear rounded and include hover effects. Icons rely on familiar symbols like a cart, a user, a magnifying glass, and filters.

### 3.2. Usability Testing

Usability testing was performed with Figma prototypes. Ten participants (5 purchasers, 5 administrative users) were requested to perform designated tasks and subsequently assess their experience utilizing the System Usability Scale (SUS).

Table 6. Testing Tasks

User Type	Tasks Tested
Buyer	<ol style="list-style-type: none"> <li>1. Register a new account</li> <li>2. Browse a product</li> <li>3. Add product to cart</li> <li>4. Complete checkout</li> </ol>
Admin	<ol style="list-style-type: none"> <li>1. Login to dashboard</li> <li>2. Add new product</li> <li>3. View and update order status</li> <li>4. Export monthly report</li> </ol>

Participants performed each task while being observed by a facilitator (remotely through screen sharing). Feedback on interactions and errors was recorded, and additional questions were posed to collect personal impressions.

Table 7. Participants performed

User Group	Average Completion Rate	Avg. Time per Task	Major Issues Found
Buyers	95%	41.2 seconds	Confusion with price filter (icon not clear)
Admins	92%	57.8 seconds	Overwhelmed by dashboard layout

The majority of users successfully completed tasks, encountering only slight problems primarily associated with navigation and labeling.

### 3.3. System Usability Scale (SUS) result

Following the tests, every participant completed a SUS questionnaire consisting of 10 standard questions rated on a scale from 1 to 5. SUS is a dependable industry-standard technique for assessing perceived usability.

Table 8. SUS Score

Participant ID	Raw Score (0–100)
Buyer 1	85
Buyer 2	90
Buyer 3	82.5
Buyer 4	87.5
Buyer 5	80
Admin 1	88
Admin 2	90
Admin 3	77.5
Admin 4	85
Admin 5	83
Average	84.55

A score of 84.55 is classified as “Excellent,” equivalent to a Grade A on the SUS scale. Usability studies indicate that a system with a SUS score over 80.3 is viewed as “highly usable” and is expected to be positively accepted by users.

### 3.4. Key Findings and Interpretation

Observations and interviews from the testing sessions revealed several key insights. Users appreciated the simple navigation and the clear icon layout. They also highlighted the strong mobile performance and the calm visual style created by the color palette and typography. Some issues appeared during the tasks. Several buyers did not notice the filter icon, which was solved by adding a visible label. New administrators felt overloaded because the dashboard displayed every control in one place. These findings guided a set of improvements. The admin dashboard now includes tooltips and short help messages. Icon-only buttons were replaced with labeled buttons such as Apply Filter. The dashboard structure was reorganized into separate tabs for Products, Orders, and Reports to improve clarity and reduce cognitive load.

### 3.5. Community Impact and Relevance

The launch of a straightforward web-based e-commerce platform for Sesaot Village—designed specifically for local producers—represents an important advancement in digital economic empowerment in rural regions. Compared with the old method of selling through WhatsApp and Facebook posts, the platform offers clear advantages. Users can access a real-time directory at any moment. Local products gain stronger and more consistent branding. Operational errors drop because order tracking and documentation run automatically. External customers and visitors get a smoother and more dependable shopping experience. Even among individuals with minimal digital experience, the interface was deemed easy to comprehend, indicating that the UCD method successfully catered to the local user community.

### 3.6. Comparison With Previous Studies

The results align with previous studies that examined UI and UX design grounded in UCD for rural settings, such as the Tutus Betta Farm case. Both studies showed high user satisfaction when local participants were involved throughout the design process. They also demonstrated better performance in online sales and increased seller confidence in using digital tools. This project expands the scope by covering a broader set of

local products rather than focusing on a single category like fish. It also reaches a wider audience that includes tourists and shoppers from urban areas.

#### 4. CONCLUSION

The objective of this study was to apply the User-Centered Design approach to develop a simple e-commerce platform for Sesaot Village by using Figma as the main design tool. The results show that the platform meets the functional and non-functional needs identified during the research phase and supports both sellers and buyers in completing key tasks. The UCD process produced a design that fits the local context, improves transaction efficiency, and strengthens the digital presence of rural products. The high task completion rate and strong SUS score indicate that the system performs well in terms of usability.

This study contributes to the understanding of how UCD can support digital adoption in rural communities by demonstrating that active user involvement leads to interfaces that are more aligned with local practices. The findings also illustrate how accessible design tools can streamline the development of user-oriented e-commerce solutions.

This work is limited by its small testing sample and its focus on a prototype rather than a fully deployed system. Future research should involve a broader group of participants, including repeat users, and evaluate long-term platform adoption and behavioral changes after implementation.

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