

User Interface (UI) Development For Ganeshpress Book Publisher Website With User-Centered Design Approach

Candra Mecca Sufyana
 Study Program of D-IV Informatics Management
 Piksi Ganesha Polytechnic Bandung
 Bandung, Indonesia
candra8mecca@gmail.com

Aly Yudin Abdul Rohman
 Study Program of DIV Informatics Management
 Piksi Ganesha Polytechnic Bandung
 Bandung, Indonesia
aliyudinabdulrohman@gmail.com

Abstract—In order to expand the publisher's promotional reach, Ganeshpress, as a publishing company for written works, requires a user interface design that can build trust and credibility in the eyes of clients toward the publisher. This research adopts a case study approach to describe the development of the Ganeshpress book publisher's website user interface using the User-Centered Design approach. The objective of this study is to design and develop a user interface (UI) based on User-Centered Design (UCD), in which the software development cycle focuses on user needs and relies on user feedback. The results of applying the User-Centered Design method indicate that active user involvement in the design process is proven effective in creating software that is not only functional but also aligned with user expectations.

Keywords- Promotion, User-Centered Design (UCD), User interface (UI) design, website (key words)

I. INTRODUCTION

In today's digital era, the presence of online platforms is a crucial element in building a brand's image and trust, including in the publishing industry. Websites serve not only as a medium for information but also as a representation of a company's professional identity. For a publishing company like Ganeshpress, having an attractive, informative, and user-friendly user interface (UI) is a strategic necessity in reaching and convincing potential clients or authors seeking to publish their work.

Digital literacy plays a crucial role in increasing customers, sales, and profits in the digital age. However, technological understanding alone is insufficient without access to digital resources. Previous findings indicate that businesses with good digital access tend to have more optimal marketing performance [1].

Therefore, user interface design is a stage in developing software or website displays that prioritizes appearance and style. The goal of interface design is to provide an interface that is acceptable to users, attractive, reflects the identity of Ganeshpress, and, of course, meets their needs.

Ganeshpress, like publishers in general, is responsible not only for publishing written works but also for building professional relationships with authors, academics, and the general public. Therefore, a representative and attractive

interface design can be an online medium that can help Ganeshpress efficiently expand its audience reach.

This research aims to design and develop the user interface for the Ganeshpress publisher website using a User-Centered Design (UCD) approach. Through stages such as understanding the context of use, identifying user needs, designing solutions, and evaluating user feedback, it is hoped that the resulting interface will provide a more intuitive user experience and increase the publisher's credibility and competitiveness in the digital realm.

The Ganeshpress website interface was developed using WordPress. WordPress was chosen because it supports the features required by Ganeshpress. Furthermore, WordPress is PHP-based, which can be integrated directly with HTML and is commonly used in developing dynamic web pages [2], and MySQL is a server-based database management system designed to handle data requests quickly and efficiently [3]. This allows WordPress to present dynamic content while also supporting complex data management with high efficiency, making it ideal for use as a website development platform that can be easily customized to user needs.

Additionally, WordPress supports front-end elements such as HTML (Hyper Text Markup Language), which serves as the foundation for developing the framework or basic structure of a web page. CSS (Cascading Style Sheets) is used to manage the visual aspects of a web page, such as color settings, layout, typography, and other aesthetic elements to create an attractive and consistent appearance. [4] This allows UI development in WordPress to be customized according to needs, allowing for more variety in UI designs without being tied to the default WordPress design.

Wordpress also supports additional features in the form of plugins, which are very helpful in developing the Ganeshpress UI. Several plugins, such as Elementor and Essential Addons, are used to design the interface visually, and WooCommerce is used to manage product catalogs and transactions according to user needs.

II. LITERATURE REVIEW

A. World Wide Web

The World Wide Web, better known as the web, is an internet-based information service that utilizes the concept of

hyperlinks to make it easier for users to browse various information sources. This ease of navigation makes the web one of the fastest-growing internet services. A key feature of the web is its ability to highlight words, images, or other elements within a document and then link them to various other media, such as text documents, video clips, audio, or other multimedia files. The web enables connectivity across documents and images, both within a single page and across pages. With the support of a browser with a graphical user interface (GUI), users simply hover over an available link and click on it to navigate to the intended source. [5]

B. Design

Design is the process of systematically planning everything from the beginning. Design is realized in visual form, resulting from previously formulated creative ideas. This process begins with random ideas, which are then processed and organized to form an orderly structure and function optimally. In general, design involves the activities of drawing, planning, and sketching that combine various elements into a unified design with a specific function [6].

C. User interface

A user interface (UI) is a means of interaction between a user and a system, encompassing both hardware and software aspects. This term is often used interchangeably with Human-Computer Interaction (HCI), which reflects all forms of interaction between humans and computers, not limited to physical components alone. All visual elements displayed on a computer screen are part of the UI. More broadly, UI encompasses the comprehensive integration of various system components designed to facilitate two-way communication between the user and the device, enabling information exchange and efficient and intuitive system operation [7].

D. User-Centered Design (UCD)

Kankainen (2003) stated that the traditional user-centered approach focuses more on the systemic and technical details, while the conceptual approach receives less attention. In response, Plos and Buisine (2006) designed a specific design flow for developing mobile devices aimed at users with visual and hearing impairments, as well as the elderly. They emphasized the importance of representing user needs through initial modeling, integrating usability-oriented design principles and visual style [8].

E. Wordpress Content Management System (CMS)

A CMS is used as the primary foundation for website management, providing a systematic structure for creating, managing, and updating digital content [9]. WordPress, one of the first CMSs developed in 2003 by Mike Little and Matt Mullenweg, is known for its user-friendly interface, diverse plugin support, and flexibility across various usage contexts, making it a popular choice for institutions requiring an efficient content management system. Currently, WordPress is used by over 43% of websites worldwide [10].

F. WooCommerce

WooCommerce is an open-source e-commerce plugin developed for the WordPress platform. Originally created by WooThemes in 2011, the plugin was later acquired and further developed by Automation. WooCommerce has become one of the most popular online shop builders globally. As open-

source software, many developers from various backgrounds have contributed to its development. [11].

III. METHOD

This research used a case study approach, where user requirements were gathered for later implementation in the interface design phase. The research focused on gathering ideas for the appearance and style of the site interface, including discussing required features. At this stage, ideas were discussed directly with the Head of the LPPM (Institute for Design and Development) as a mentor. After all ideas were gathered, a new initial design was created.

In general, the iterative approach in the UCD methodology is divided into four distinct phases. First, the designer understands the context in which the interface will be used. Then, specific user needs are identified. Next, a design solution is developed according to the previously identified needs. The design will then be evaluated to ensure it fully meets user needs.

The user interface development for the Ganeshpress Book Publisher website, using a user-centered design approach, emphasizes iterative communication in its design. The iterations are divided into four stages, consistent with the general UCD approach, as illustrated below:

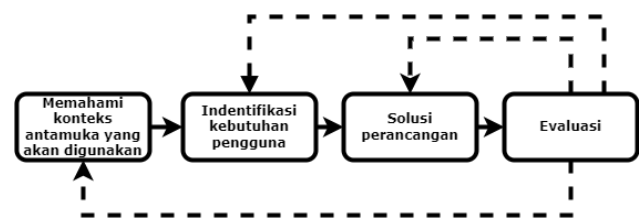


Figure 1. phase of UCD

Explanation:

1. The initial stage of the User-Centered Design (UCD) approach focuses on understanding the basic needs of users. This process includes identifying the characteristics of the users who will utilize the product, as well as understanding their goals and motivations for using the product [12]. Discussions include interface ideas, required features, and who will be the primary users of the system.
2. Identifying specific user needs: In subsequent iterations, the discussion focuses on identifying specific user needs in more detail. The output of this stage is the desired interface concept and required menu features [13].
3. Design solution: After identifying needs, the interface design process is carried out based on the results of the user needs analysis. Wireframes are used as the basic framework for designing the user interface, with the goal of producing a design that aligns with user preferences and expectations. [14]
4. Evaluation: This stage aims to evaluate the extent to which the digital interface design, which is not yet physical, can function effectively for users. At this stage, feedback is collected from users who have conducted trials. The results of this evaluation will be used as a basis for understanding user needs in more depth [15].

IV. RESULT

Implementation of the UCD Development Method

Based on the four phases of developing the User Interface (UI) for the Ganeshpress Book Publisher website using a User-Centered Design approach, the following are the results of the iterative approach:

No	Fase komunikasi iteratif / Iterative communication phase	hasil komunikasi iteratif / iterative communication results
1	Memahami konteks antarmuka / Understanding interface context	The users of this system are website visitors, both general individuals, writers and academics.
2	Identifikasikan kebutuhan dari pengguna / Identify the needs of the user	Several desired display concepts were produced, namely: Home page: the main website display containing service information, pricing packages, products, and contact information. Catalog and product pages E-commerce features such as adding charts, product detail features, and a checkout page. Preview page linked to journal publications.
3	Solusi pedesign / Design solutions	Developed ideas for interface wireframe designs according to user needs.
4	Evaluasi/Evaluasi on	Adjusted the Ganeshpress name and logo Added a welcome message that better reflects the publisher's identity Revised the services section Added a product package section to the homepage Added a product display to the homepage Added an about us page containing publisher information Added a product catalog Replaced the "review" menu with "publications" but with the same functionality

Table 1 result of UCD iteration

The design solution was then developed, followed by a wireframe design for the interface. The final design included all the menus discussed in the previous stage, with a structure

and appearance tailored to the user needs discussed earlier. The resulting wireframe design is as follows:

Wireframe Design homepage:



Figure 2. Design wireframe Homepage (welcome page)

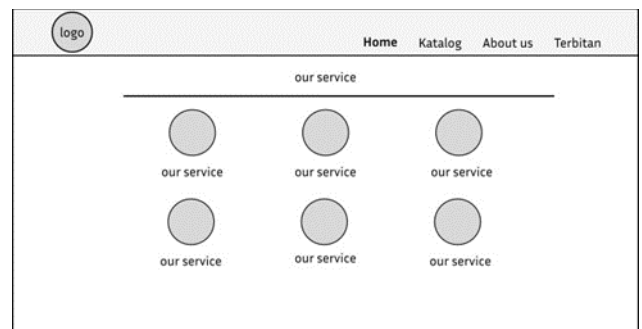


Figure 3. Design wireframe Homepage (our service)

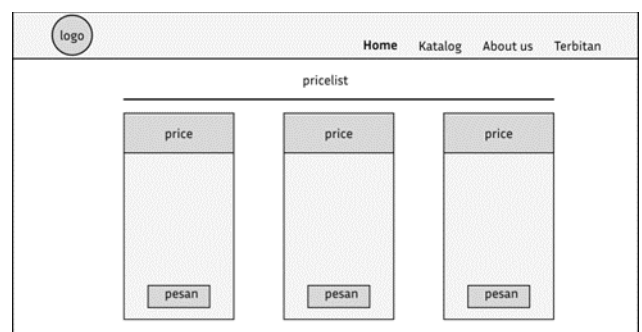


Figure 4. Design wireframe Homepage (pricelist)

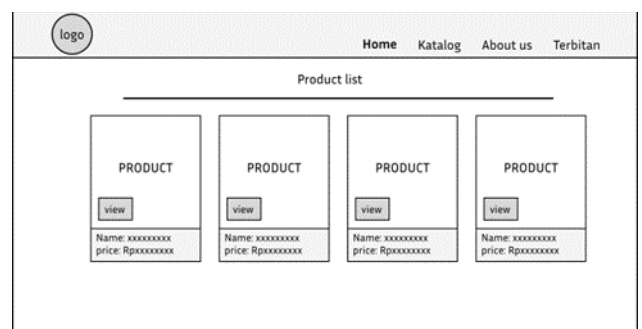


Figure 5. Design wireframe Homepage (product list)

Design wireframe catalog and product:

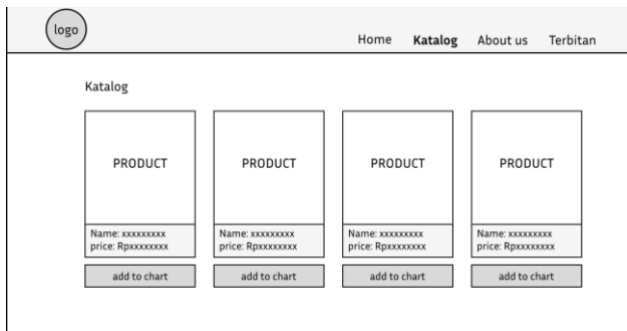


Figure 6. Design wireframe product and catalog (main page)

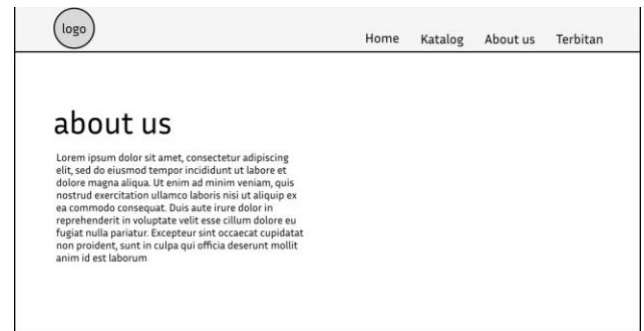


Figure 10. Design wireframe about us

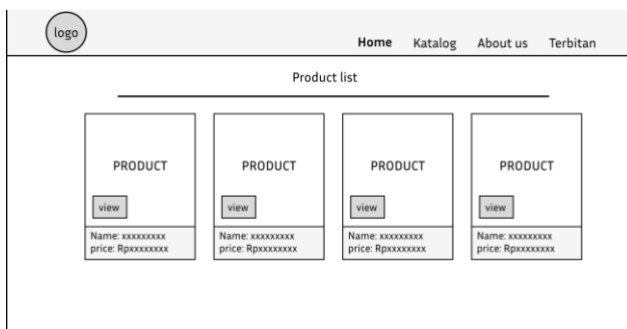


Figure 7. Design wireframe product and catalog (product list)

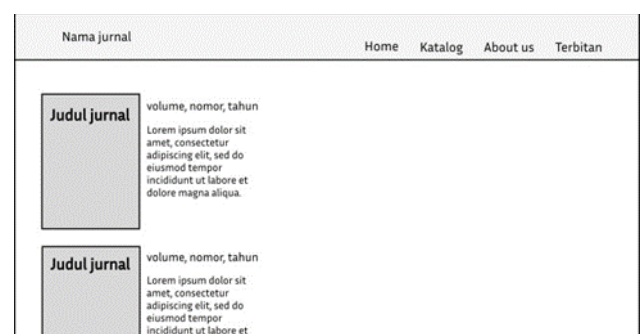


Figure 11. ojs-web publish



Figure 8. Design wireframe product and catalog (chart)

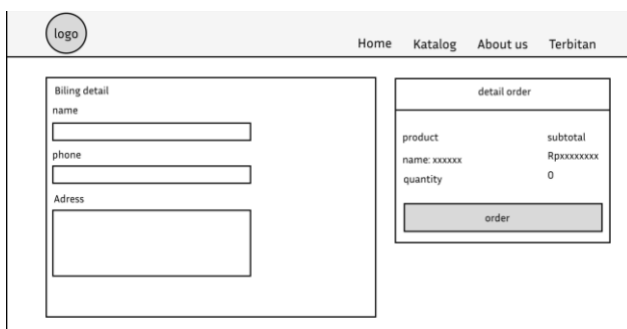


Figure 9. Design wireframe product and catalog (check out)

Design wireframe page about us:

After going through the steps above, the Ganeshpress interface design can be considered to meet the needs of users, in this case, site visitors.

The Ganeshpress publisher website was designed using a User-Centered Design (UCD) approach to meet the needs of visitors, authors, and academics. Through four stages: user understanding, needs identification, wireframe design, and evaluation, the resulting interface design is informative, simple, and meets its objectives. Final revisions included adjustments to the publisher's name, the welcome page on the homepage, comprehensive service information, and the addition of product and service package pages.

The following is a workflow or flowchart for the Ganeshpress publisher website:

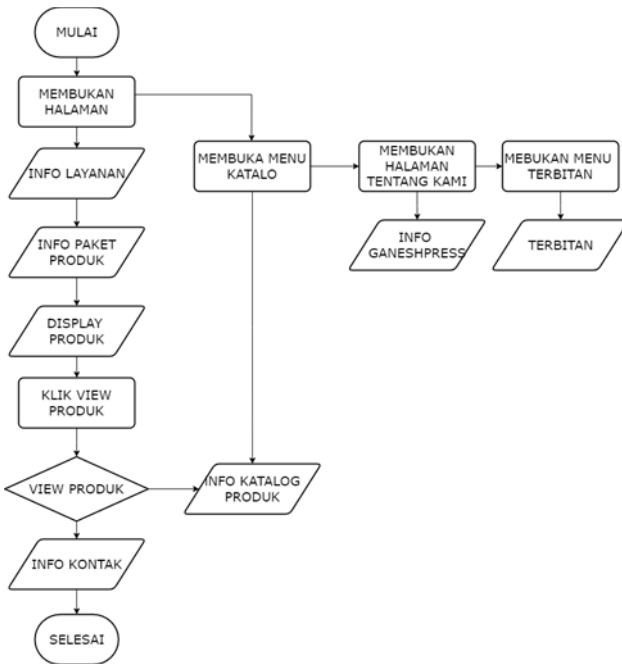


Figure 12. Diagram flowchart

INTERFACE DEVELOPMENT

Wordpress was used to develop the Ganeshpress website interface. It was chosen because it offers a fast and efficient development process and supports the features required by Ganeshpress. Furthermore, because WordPress is based on PHP and MySQL, the characteristics behind the WordPress system are familiar, as PHP and MySQL are well-known and have active communities.

Additional features in the form of plugins are used. This greatly assisted in the development of the Ganeshpress UI, which utilizes several plugins, such as Elementor and Essential Addons, for visually designing the interface, and WooCommerce, for managing product catalogs and transactions according to user needs.

For more details, see the details of the Ganeshpress website design.

1. Homepage

The Ganeshpress homepage displays an overview of the publishing services offered, including featured features, detailed service information, pricing options, a list of published books, and contact information for consultations or collaborations. This page is designed to allow visitors to easily understand what's on offer and directly access the services they need.

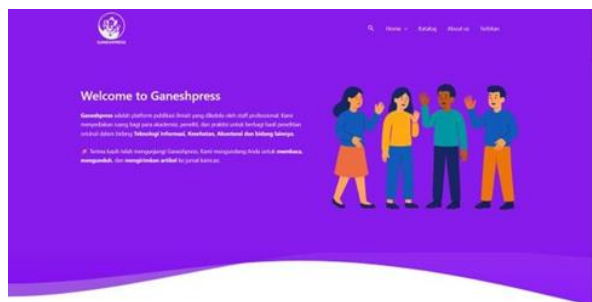


Figure 13. Homepage Ganeshpress

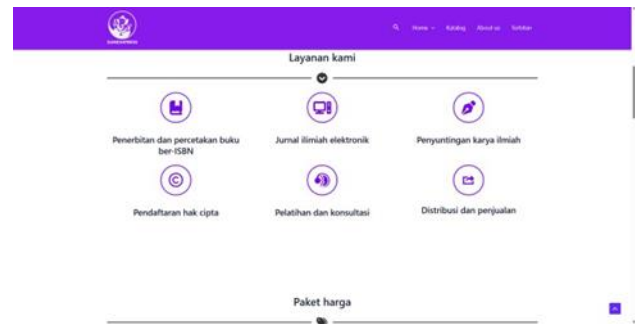


Figure 14. display info service



Figure 15. display info pricelist

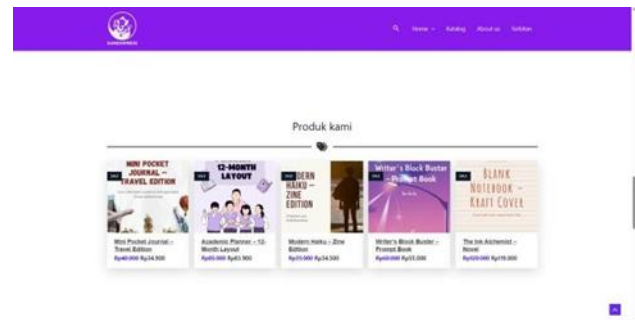


Figure 16. display info products

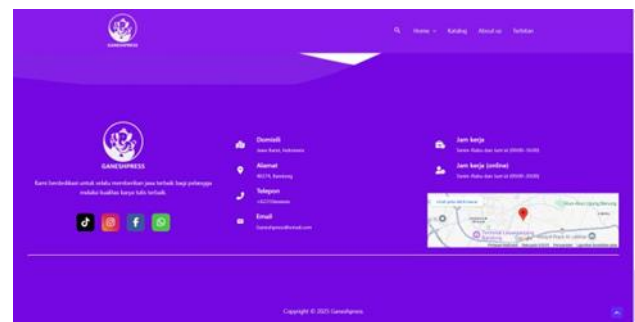


Figure 17. display info contact

2. Catalog

The catalog page on the Ganeshpress website displays a list of published products, complete with information such as title, author, short description, price, and cover art. Visitors can browse the various genres and categories of books available. Each book item features an "Add to Cart" feature that allows users to add the book to their shopping cart for purchase. The page is designed for easy navigation, making it easy for readers to find and purchase their favorite books directly from the site.

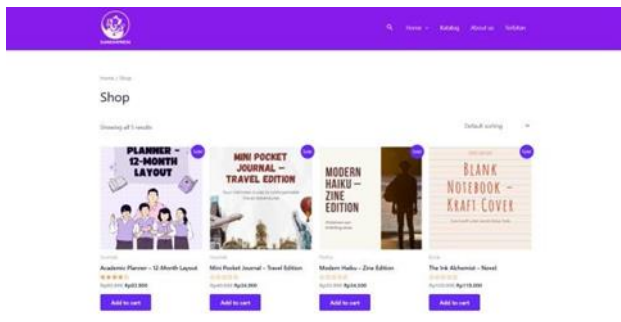


Figure 18. display catalog page

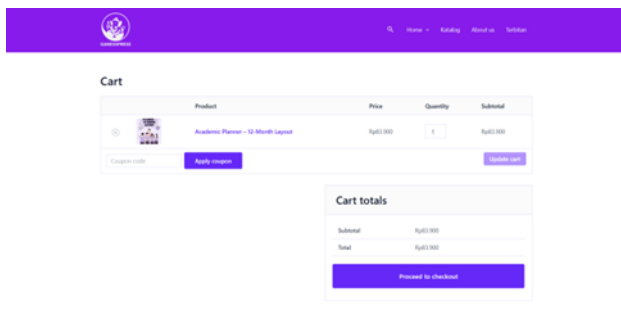


Figure 19. chart page

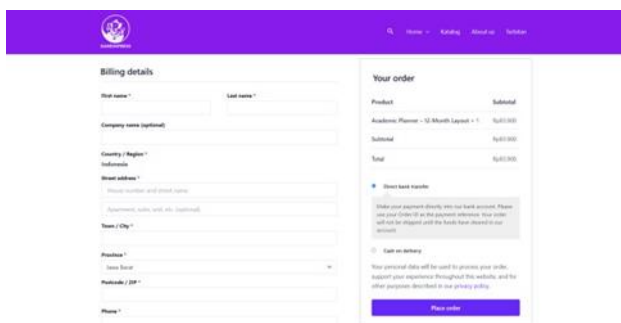


Figure 20. checkout page

3. About us

The About Us page on the Ganeshpress website contains information about the publisher's profile, as well as Ganeshpress' commitment to supporting authors to publish their work professionally.

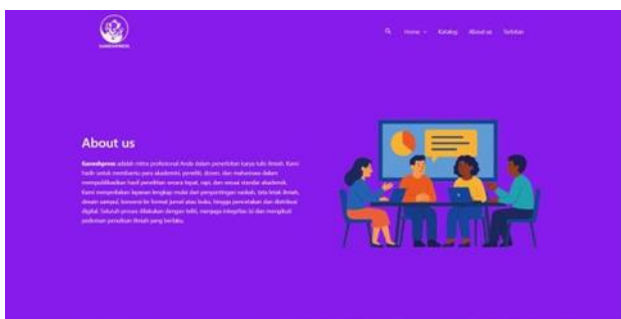


Figure 21 about us

4. Publish

To support professional and standardized scientific journal publication, the Publications page on the Ganeshpress website is integrated with Open Journal Systems (OJS). OJS is a

scientific journal management platform widely used by academic institutions and publishers. Therefore, the publications menu will only display OJS pages, as shown below:



Figure 22 publish

In this design phase, WordPress, a Content Management System (CMS), was used. Essential add-on plugins were used to add supporting elements, such as containers for display management, and widgets like price lists, product displays, icon pickers, buttons, paragraphs, and images. The WooCommerce plugin was also used to manage transactions and products, including the catalog and cart pages. The following is an explanation:

- To build an interactive and aesthetic interface, the Essential Addons for Elementor plugin is used. This plugin plays a crucial role in providing the visual elements needed during the page design process. Some of the elements utilized include:
 - Container & Section: Manages the structure and layout of the page.
 - Price List: Displays service packages and prices in a structured manner.
 - Product Display: Displays available published products.
 - Icon Picker: Adds visual icons to clarify functions or features.
 - Button: For navigation and user actions such as "view product" or "Buy Now."
 - Paragraph & Image: Inserts supporting text and images into the content.
- To support the online store function, this website also uses the WooCommerce plugin. This plugin provides key features for product and transaction management, including:
 - Product Management: Adds, edits, and organizes product catalogs.
 - Product Catalog: Provides a dedicated page for displaying a list of books or services available for purchase.
 - Cart Page: Manage the products users select before checkout.
 - Checkout & Transaction: Easy and efficient payment process.
- The combination of Elementor (Essential Addons) and WooCommerce enables the Ganeshpress site to: Provide a professional and informative appearance, Manage products and transactions systematically, and Present service and publication information in a display that is easy for visitors to understand.

V. CONCLUSION

The Ganeshpress website interface was successfully developed using a User-Centered Design (UCD) approach through four iterative phases: understanding user context, identifying needs, designing solutions, and evaluating. Each stage resulted in a design and functionality tailored to the needs of primary users: general visitors, writers, and academics.

WordPress was chosen as the CMS due to its flexibility and robust plugin ecosystem. The combination of Elementor, Essential Addons, and WooCommerce plugins allows for the development of an informative and aesthetically pleasing user interface (UI) that optimally supports e-commerce functionality.

The end result of this development is a website that:

1. It has a professional and easy-to-navigate interface.
2. It provides comprehensive information regarding publishing services, product catalogs, and scientific publications.
3. It supports online transactions with an integrated product management system.
4. It reflects Ganeshpress's identity and commitment as a professional publisher.

Overall, the UCD approach has proven effective in building site interfaces that are not only functional, but also oriented towards user experience and needs.

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