



## Design and Development of Marketing Media Website at UD. Pasindo Pustaka Mandiri Using Design Thinking Method

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### Abstract

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Changes in consumer behavior have become a challenge for companies in managing marketing strategies. The willingness to innovate has made UD. Pasindo Pustaka Mandiri requires new marketing media to reach a broader sales market and adapt to the current technological era, mainly through a website. This research aims to design and build a website for a company using the Laravel framework and the design thinking methodology. The system development using the design thinking method resulted in a marketing website. System testing applied black box testing with descriptive analysis, yielding a feasibility score of 97.22%, interpreted as 'very feasible.' The System Usability Scale testing produced an average score of 74.29, falling within the Acceptability Range with the category 'Acceptable.' According to the grade scale, the system received a 'C' category, and in terms of adjective rating, it was rated as 'Good.' The result is that the website is highly feasible and acceptable.

**Keywords:** UD. Pasindo Pustaka Mandiri, Marketing, Design Thinking Method

### Abstrak

Perubahan Perubahan perilaku konsumen menjadi tantangan bagi perusahaan dalam mengelola strategi pemasaran. Ketersediaan untuk berinovasi menjadikan UD. Pasindo Pustaka Mandiri memerlukan media pemasaran baru untuk menjangkau pasar penjualan yang lebih luas dan beradaptasi dengan era teknologi saat ini, khususnya melalui website. Penelitian ini bertujuan untuk merancang dan membangun website untuk perusahaan menggunakan framework Laravel dan metodologi design think. Pengembangan sistem dengan metode design thinking menghasilkan sebuah website pemasaran. Pengujian sistem menggunakan pengujian black box dengan analisis deskriptif menghasilkan skor kelayakan sebesar 97,22% yang diartikan 'sangat layak'. Pengujian Skala Kegunaan Sistem menghasilkan skor rata-rata sebesar 74,29, termasuk dalam Rentang Akseptabilitas dengan kategori 'Dapat Diterima'. Menurut skala nilai, sistem menerima kategori 'C', dan dalam hal peringkat kata sifat, sistem dinilai 'Baik'. Hasilnya adalah website sangat layak dan dapat diterima.

**Kata-kata kunci:** UD. Pasindo Pustaka Mandiri, Pemasaran, Metode Design Thinking.



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## 1. Introduction

In the business world, technological advancements have become innovations and are starting to be competed among companies. More than 95% of businesses in developing countries are Small and Medium Enterprises (SMEs) (OECD, 2012). SMEs in Indonesia contribute 60% of GDP and employ 97% of the workforce [1]. The large number of companies influences the type of innovations they will use to reach a broader market. Companies' utilization of technology varies widely, ranging from communication and transactions to marketing [2].

Offline marketing attracts consumers to visit and purchase products or services by placing advertisements such as brochures, billboards, and pamphlets in strategic locations [3]. However, a new medium has emerged that leverages the Internet to connect producers, distributors, and consumers [4]. This activity uses the internet as an intermediary to seek information and communicate. Implementing the use of technology as a marketing medium at UD. Pasindo Pustaka Mandiri also offers numerous benefits for the company, such as improving service quality, acquiring new customers while retaining existing ones, and serving customers without time constraints [5].

UD. Pasindo Pustaka Mandiri is a company that distributes educational books, specifically student worksheets (LKS). This company was established and has been operational since 1995. With its infrastructure readiness and willingness to innovate, UD. Pasindo Pustaka Mandiri currently requires a new digital marketing medium in the form of a website [6]. According to an interview with Suharno, the owner, conventional marketing methods, such as word-of-mouth, are less effective as they incur high operational costs and labor. Choosing a website as a marketing medium also aims to facilitate users' cooperation in procuring LKS books within its market reach. The company's market reach includes schools in the Banyumas and Brebes areas. The increasing number of new competitors in each area demands that the company continually innovate to make ordering and procurement collaboration more accessible for users [7].

The Design Thinking method can address specific problems and requirements based on the outlined issues and needs [8]. This method focuses on generating ideas and solutions through empathy, thereby understanding needs and focusing on user perspectives [9]. The appearance and features of the website play a crucial role in supporting marketing. In designing the appearance and features, this website is also developed using the Laravel framework to effectively meet the website's marketing needs.

## 2. Method

In this research, several stages were undertaken to create a website as a marketing medium using the Design Thinking method. Design Thinking is a design approach used to solve problems by understanding the needs of the humans involved in the design process[10]. There is an explanation of five stages in Design Thinking:

### 1. Empathize

The empathize stage is the process of understanding the needs and challenges of users. In this stage, researchers conducted observations and interviews with the company owner and potential users, namely high school and junior high school teachers in Banyumas, to gather information. The researchers need to understand the business goals and processes at this stage so that the subsequent stages in the Design Thinking method can proceed effectively and efficiently [11].

### 2. Define

The define stage involves identifying the core problem based on insights gathered during the empathize stage. Through the observations and interviews conducted in the empathize stage, the core problem identified is that UD. Pasindo Pustaka Mandiri needs a digital marketing medium in the form of a website to reach a wider market and adapt to modern developments, particularly in marketing [12].

### 3. Ideate

In the ideate stage, brainstorming and idea generation are used to propose possible solutions. In this phase, after brainstorming and identifying the problem, the solution proposed is a website that includes the company profile, catalog information, book information, collaboration information, and a feature for users to order books, integrated with WhatsApp for the subsequent ordering process [13].

### 4. Prototyping

The prototyping stage involves creating a tangible representation of the proposed solution. Once the proposed solution addresses the problem, the product begins to be designed in the prototype phase. In this phase, the design is created considering user interface and user experience and is directly implemented into the website. The problems identified are translated into a design known as User Experience Design (UXD), which includes creating the Information Architecture, user flow, and resulting in a website. The next step is the User Interface Design

(UID) phase, which involves creating a mood board, style guide, design system, and UI design, and making a marketing website using Laravel 10 [14].

## 5. Testing

The testing stage assesses the functionality and usability of the prototype. In this stage, Blackbox Testing will be conducted to test the feasibility of the website, followed by an evaluation of the created website. The evaluation method uses the System Usability Scale (SUS), with respondents being high school and junior high school teachers in the Banyumas area. Once the data is collected, researchers can analyze it to determine whether the website is deemed feasible or not [15].

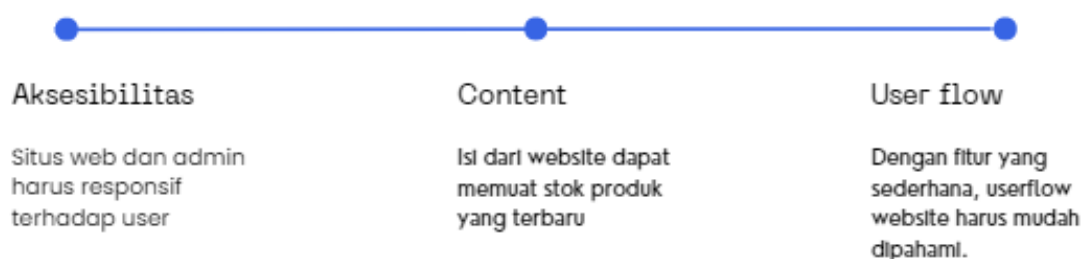
## 3. Results and Discussion

### 3.1. Results

After analyzing the requirements for designing the intended system, the application of the Design Thinking methodology using the Laravel framework to build a website involves several stages as follows:

#### 1. Empathize

The first step involves conducting interviews with the company owners and potential users. These interviews aim to identify pain points, which can provide valuable insights for the subsequent stages of development [16]. Pain point is presented in [Figure 1](#).



**Figure 1.** Pain Point

#### 2. Define

At this stage, the author has defined their understanding of the problem to be solved. A user persona is created to help the author visualize an individual who will eventually use the website [17]. The user persona is presented in [Figure 2](#).



Figure 2. User Persona

### 3. Ideate

A brainstorming session was conducted with the owner of UD to obtain optimal ideas and solutions. Pasindo Pustaka Mandiri to generate the best ideas. Table 1 presents the designed ideas and solutions [18].

Table 1. Idea and Solution

Idea and Solution	Implementation
To build a login system that simplifies the admin's management of orders, product catalog, and partnership data.	Add an admin feature for order checking, product stock management, and partnership data. The admin feature will include CRUD (Create, Read, Update, Delete) functionalities.
To create a profile page that includes the company's profile and a short ordering video.	The website will feature a jumbotron containing a short video and a section showcasing the collaborating publishers.
Creating a product stock page with a book catalog and a pop-up showing book information.	The product stock page contains a book catalog for placing orders and detailed book information.

### 4. Prototype

The next stage involves building the website based on the ideas and solutions that have been created [19].

#### a. Home page

Home page is presented on Figure 3.

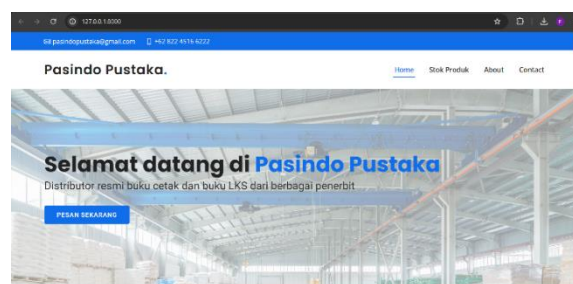


Figure 3. Home Page

b. Product Stock Page

The product stock page is presented in Figure 4.

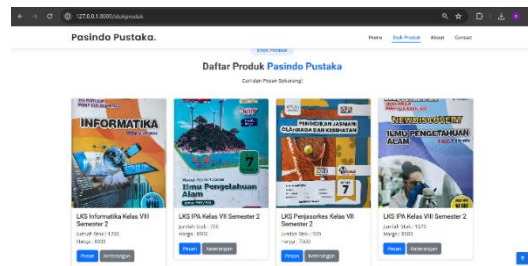


Figure 4. Picture Product Stock Page

c. Ordering Form Page

The ordering form page is presented in Figure 5.

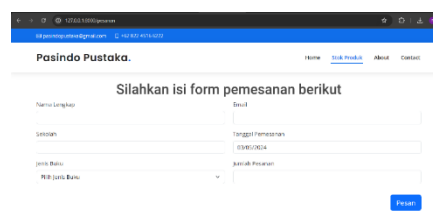


Figure 5. Ordering Form Page

d. Admin Page

The admin page is presented in Figure 6.

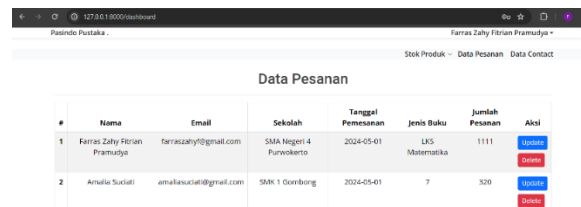


Figure 4. Admin Page

e. Test

Next, the final stage in design thinking is testing. To test the features of the website and to measure its usability, the researcher employs two methods in the testing stage: Blackbox Testing and System Usability Scale (SUS) evaluation [20].

1. Blackbox Testing

Based on the conducted testing, a recapitulation of the feasibility of the features of this website is obtained.

Table 2. Blackbox Testing Recapitulation

No	Testcase	Successful Testing	Unsuccessful Testing
1	Admin Page	46	2
2	User Page	24	0
Total Hasil Pengujian		7-	2

## 2. System Usability Scale (SUS)

This testing uses Stratified Sampling with a minimum threshold of 30 samples per group. The questionnaire is distributed via Google Form to 60 respondents divided into 2 groups: Junior High School Teachers and Senior High School/Vocational School Teachers. Here are the results of the SUS score calculation:

$$SUS \text{ Average Score} = \frac{\text{Total SUS Value}}{\text{Total Respondent}}$$

$$SUS \text{ Average Score} = \frac{4457,5}{60}$$

$$SUS \text{ Average Score} = 74,29$$

## 3.2. Discussion

Based on the literature review, it can be concluded that the Design Thinking method is highly suitable for application in marketing websites, especially to meet user needs. Previous studies have applied the Design Thinking method only to the design stage. Therefore, this research will explain the Design Thinking method up to the system implementation and its usability level with the following results:

### a. Blackbox Testing

The results of the Blackbox Testing, with a total of 72 scenario patterns, yield the following feasibility percentages:

$$\text{Eligibility Percentage} = \frac{\text{Skor Observasi}}{\text{Skor yang diharapkan}} \times 100\%$$

$$\text{Successful Testing} = \frac{70}{72} \times 100\% = 95,83\%$$

$$\text{Unsuccessful Testing} = \frac{3}{72} \times 100\% = 4,17\%$$

Therefore, it can be concluded that the website is highly feasible and can be used effectively.

### b. System Usability Scale (SUS)

The average SUS score calculation results in 74.29, which falls within the Acceptability Ranges level, categorized as Acceptable. According to the Grade Scale level, the system is categorized as C, whereas according to the adjective rating, the system achieves the 'Good' category.

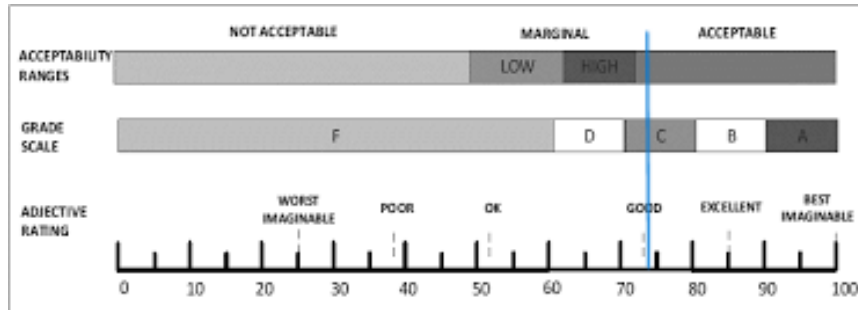


Figure 5. Range of SUS Test Result Values

#### 4. Conclusion

Based on the research on the design and development of a marketing website using the design thinking method and black box testing, along with usability testing using the SUS method, several conclusions were drawn as follows:

- The design and development utilized the Laravel framework, with Bootstrap framework for styling.
- The project process consisted of 5 stages, starting from Empathize, Define, Ideate, Prototyping, and testing.
- The system passed all stages of black box testing evaluation and achieved a rating of Highly Feasible. This indicates that the functionality and performance of this system meet the established standards.
- The average score of the System Usability Scale (SUS) testing was 74.29. This indicates user satisfaction with the marketing website of UD. Pasindo Pustaka Mandiri. These results place the system in the GOOD category with a grade scale of C. Therefore, the overall conclusion is that the system is good and acceptable to users.

#### 5. Acknowledgement

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