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Designing an E-Shop as a Promotional Medium for MSME Products at Azis Furniture Using the OpenCart Platform

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Abstract

Perkembangan teknologi informasi membuka peluang besar bagi UMKM untuk memperluas pemasaran melalui kanal digital. Namun, Azis Perabot — UMKM penjualan furnitur — masih terkendala meningkatkan jangkauan promosi karena bergantung pada metode tradisional. Artikel ini bertujuan merancang dan menerapkan E-Shop berbasis OpenCart sebagai media promosi untuk meningkatkan visibilitas produk secara online. Penelitian menggunakan metode Research and Development (R&D) dengan pendekatan deskriptif kualitatif dan model pengembangan ADDIE. Proses pengembangan meliputi analisis kebutuhan bisnis, perancangan sistem, implementasi fitur utama E-Shop, serta pengujian prototipe untuk memastikan fungsionalitas. OpenCart dipilih karena fleksibilitas, kemudahan penggunaan, dan dukungan fitur e-commerce yang memadai. Hasil penelitian berupa prototipe E-Shop yang berfungsi sebagai katalog produk digital, mempermudah pengelolaan produk, dan meningkatkan aksesibilitas pelanggan dalam memilih serta membeli furnitur. Meski demikian, E-Shop masih terbatas pada penerapan offline dan belum diunggah ke jaringan online yang lebih luas. Temuan ini menjadi langkah awal penting dalam digitalisasi UMKM untuk meningkatkan efisiensi promosi dan daya saing di era digital yang kian pesat. Peneliti selanjutnya diharapkan mengintegrasikan E-Shop ke jaringan online, melakukan uji coba langsung, serta mengevaluasi dampaknya terhadap penjualan dan promosi Azis Perabot. Artikel ini diharapkan memberi kontribusi pada percepatan transformasi digital UMKM di Indonesia dan menjadi rujukan bagi pelaku lain dalam memanfaatkan teknologi untuk memperluas pasar. Dengan langkah berkelanjutan, semakin banyak UMKM diharapkan mampu tumbuh dan bersaing di pasar global yang kompetitif, dengan pendekatan etis, efektif, inklusif, adaptif.

Abstract

The rapid development of information technology offers major opportunities for MSMEs to expand their marketing through digital channels. However, Azis Perabot—an MSME in furniture retail—still struggles to broaden its promotional reach due to reliance on traditional methods. This article aims to design and implement an OpenCart-based e-shop as a promotional medium to enhance online product visibility. The study employs a Research and Development (R&D) method with a qualitative descriptive approach and the ADDIE development model. The development process includes business needs analysis, system design, implementation of core e-shop features, and prototype testing to ensure functionality. OpenCart was chosen for its flexibility, ease of use, and adequate e-commerce features. The study delivers an e-shop prototype that serves as a digital product catalog, streamlines product management, and improves customer access to selecting and purchasing furniture. Nonetheless, the e-shop remains limited to offline deployment and has not yet been published to a broader online network. These findings represent an important first step in MSME digitalization to increase promotional efficiency and competitiveness in a rapidly evolving digital era. Future researchers are expected to integrate the e-shop with online networks, conduct live trials, and evaluate its impact on Azis Perabot's sales and promotion. This article is expected to contribute to accelerating MSME digital transformation in Indonesia and to serve as a reference for other MSMEs seeking to use technology to expand their markets. With sustained efforts, more MSMEs can grow and compete ethically, effectively, inclusively, and adaptively in the global market.

INTRODUCTION

In recent years, advances in *digital* technology have changed various aspects of life, especially in the business world. Information technology, which includes hardware, software, and communication networks, now plays a major role in accelerating and facilitating data processing and communication.

This has opened up vast opportunities for businesses, especially micro, small, and medium enterprises (MSMEs), to expand their market reach and optimize sales. Amidst increasing competition, the use of *digital platforms* such as *e-commerce* has become essential for increasing product sales.

With the increasing need for MSMEs to reach a wider market, the presence *of e-commerce platforms* is becoming more relevant. The article by Karnelis et al. (2023) shows that *e-commerce* technology provides solutions for MSMEs in overcoming the limitations of traditional marketing, while significantly expanding their consumer reach. Furthermore, the article emphasizes that technology integration can help SMEs improve the efficiency of customer interactions, a crucial aspect for business sustainability in the *digital* era. In this context, *platforms* like *OpenCart* offer flexibility and features tailored to the *digital* marketing needs of SMEs such as Azis Perabot(Karnelis et al., 2023) .

Furthermore, training in information technology is becoming increasingly crucial to ensure that MSME players can make the most of *digital platforms*. An article by Zulfiana et al. (2024) notes that training focused on the use of social media and graphic design applications can equip MSME players to create attractive and relevant promotional content. This approach not only increases the appeal of products in the eyes of consumers, but also strengthens their brand image in local and national markets. This is particularly relevant for Azis Perabot, where creativity in promoting furniture products is a determining factor in competitiveness in a competitive market(Zulfiana T et al., 2024) .

Creativity is also discussed in an article by Carlina Ulfah and Neni Yulianita (2024), which highlights that the use of innovative *e-commerce platforms* such as *TikTok* can help SMEs expand their marketing reach with a more personalized approach. Creative short video content can attract attention, especially from younger generations who are active on social media. For Azis Perabot, this strategy offers a visual and emotional way to introduce furniture products and build stronger relationships with customers(Ulfah & Yulianita, 2024) .

Dominant *e-commerce platforms*, such as Shopee, also provide valuable lessons on how *digital* features can support SME promotion strategies. Kurniawati Safitri (2024) notes that features such as *Shopee Live*, diverse payment options, and wide market reach provide significant advantages for businesses. Although this article focuses on *Shopee,* the principles can be adapted to design *an OpenCart-based platform* for Azis Perabot. By utilizing integrated technology, Azis Perabot has the potential to expand its market reach in a more efficient and cost-effective manner(Safitri, 2024) .

On the other hand, the article by Ardin Umar and colleagues (2024) emphasizes the importance of technical training in utilizing social media *platforms* such as *Facebook, Instagram,* and *YouTube* as promotional tools. Social media not only provides opportunities to reach a wider *audience* but also enables direct interaction between SMEs and consumers. In the context of Azis Perabot, such training can enhance their ability to effectively utilize *the OpenCart platform* and maximize the potential of *digital* marketing(Ardin Umar, Nurhikma Sibuah, Yuliana, Sitti Marwa Kharie, 2022) .

Considering the various articles above, *the OpenCart-based E-Shop* design for Azis Perabot is expected to meet *digital* promotion needs while improving operational efficiency. This *platform* is not only designed to simplify product management but also to support creative marketing strategies that can strengthen Azis Perabot's competitiveness in local and national markets. This digitalization opens up great opportunities for SMEs to grow, especially in facing the challenges of a rapidly evolving technological era.

The article by Jasri et al. (2022) shows that *digital* marketing can significantly increase the income of MSMEs. The use of social media and *e-commerce* has proven to be effective in reducing promotional costs, expanding markets, and increasing business operational efficiency. However, major challenges remain in the implementation of *digital* marketing, particularly related to the lack of *digital* understanding and skills among MSME players, which is a major obstacle in utilizing the potential of this technology(Jasri et al., 2022) .

Himmatul Aliyah (2022) reveals that a lack of understanding of *digital* technology is a major obstacle for MSMEs in developing and marketing their products. Aliyah emphasizes the importance of structured training to improve the skills of MSME players in utilizing *modern* technologies, such as *digital* marketing and *e-commerce*, in order to expand markets and improve community welfare. In addition, information technology also enables business actors to gain deeper insights into consumer behavior and market trends, which can be used to optimize their marketing strategies(Aliyah, 2022) .

Az-Zahra and Arti Sukmalengkawati (2022) found that consistent and engaging use of *digital* marketing can significantly increase consumer interest in purchasing. Social media platforms such as *Instagram, Facebook,* and *TikTok,* as well as *e-commerce platforms* that facilitate *online* transactions, provide businesses with the opportunity to introduce their products to a wider *audience*. Therefore, creative and targeted *digital* marketing strategies are highly relevant and important to support business sustainability, especially amid intense market competition(Az-Zahra & Sukmalengkawati, 2022) .

An article by Sarah Putri Madania and her team (2023) reveals that many SMEs still do not fully understand the concept of *digital* marketing and how to maximize the use of *digital platforms*. To overcome this obstacle, training and mentoring for SME players is very important, including in creating and managing accounts on *platforms* such as Tokopedia. With better knowledge and skills, SME players can manage their *digital* marketing more effectively, increase product visibility, and expand their market reach(Madania et al., 2023) .

Sumartini Putri (2022) highlights that creative marketing strategies, such as using influencers and *digital* celebrities for endorsements, can attract consumer attention and significantly increase turnover. This creative marketing approach allows businesses to reach a wider *audience* and build trust with customers. Amidst fierce competition in the *digital* world, this strategy gives SMEs an advantage in strengthening relationships with consumers and differentiating their brands from competitors(Putri, 2022) .

The article by Dewi NPNC and Nasution DAD (2023) also emphasizes that *e-commerce* is an important solution for SMEs in managing products, promotions, and transactions more efficiently. *E-commerce platforms* provide access to a wider market and accelerate transactions at a lower cost compared to traditional marketing methods. With the implementation *of e-commerce,* SMEs can compete not only in the local market but also globally, increasing their competitiveness and expanding their market reach(N. Dewi & Nasution, 2023) .

However, behind the various opportunities above, there are still a number of challenges faced by MSMEs. Based on interviews with the owner of MSME Azis Perabot, MSMEs often face obstacles such as a lack of marketing outside their local area, which limits their market reach. In addition, many MSME players have not made the most of *digital* technology, such as the use of social media specifically for promotion or the implementation of creative *digital* marketing strategies.

Other challenges include the efficiency of production and delivery processes, especially for custom orders that take longer. In addition, most MSMEs still lack product design variety and creative promotions, such as discounts or collaborations with *influencers*, which can increase the attractiveness of their products. Limitations in legality and branding are also significant obstacles, which reduce consumer confidence and opportunities for collaboration with larger partners.

With these findings, it is clear that *digital* literacy is a key element that is very important for the sustainability and growth of micro, small, and medium enterprises (MSMEs) in this *digital* era. *Digital* literacy includes the ability to understand, use, and utilize *digital* technology effectively in various aspects of business operations, from marketing and product management to customer service. MSME actors with high levels of *digital* literacy tend to be more adaptable to technological changes and increasingly fierce market competition. Therefore, through continuous training and coaching, MSME operators can optimize various *digital* technologies to improve their marketing efficiency, expand their market share, and create better relationships with customers. This is particularly relevant in a situation

where business competition is no longer only local, but also involves a dynamic and competitive global market(Rais et al., 2023) .

To address the challenges identified, this article aims to design and develop an *OpenCart-based E-Shop* that serves as a medium for promoting and marketing products for Azis Perabot MSMEs. *OpenCart* was chosen as *the* main *platform* due to its advantages in terms of flexibility, ease of use, and availability of features that are highly suited to the needs of MSME businesses. This *platform* is designed to support various *e-commerce* functions, including product inventory management, integration with various payment methods, and sales data analysis, all of which can help improve operational efficiency.

The novelty of this article lies in the application *of OpenCart* as an *e-commerce* technology solution specifically designed to meet the needs of SMEs in the furniture sector, which until now has not been widely implemented, especially at the local level. This novelty includes a technical and strategic approach, where *OpenCart* is not only integrated as a transaction tool but also as a promotional medium that can increase consumer appeal through interactive and personalized features. This article also emphasizes the importance of a *user-friendly* approach, so that MSME players with limited *digital* skills can easily operate this *platform* without requiring complex technical training. In addition, this article offers practical guidelines that can be used by other MSMEs as a reference in adopting *e-commerce* technology to increase their competitiveness in the ever-evolving *digital* era. These guidelines cover technology integration strategies, the use of *digital* marketing features, and more effective consumer data management to create *data-driven* business decisions.

Through the design *of* this *OpenCart-based E-Shop*, this article hopes to make a real contribution in supporting the *digital* transformation of MSMEs, particularly in increasing product visibility, expanding market reach, and encouraging business sustainability amid rapid technological developments. *Digital* transformation not only helps MSMEs survive in an era *of* technological *disruption*, but also opens up new opportunities to expand their market to an international scale. By implementing an integrated and technology-based *platform* such as *OpenCart,* MSMEs such as Azis Perabot can become more competitive in facing *modern* market challenges, while providing a better experience to consumers through faster, more transparent, and more personalized services. This article is also expected to be an important reference for other MSME players who want to start their journey towards digitalization, as well as for the government and related institutions that are striving to encourage the development of MSMEs in Indonesia through *digital* technology.

METHOD

This article uses the *Research and Development (*R&D*)* method with the ADDIE (*Analysis, Design, Development, Implementation, and Evaluation*) development model to design and implement *an OpenCart-based E-Shop* as a product promotion solution for Azis Perabot SMEs(N. P. S. Dewi et al., 2023) . The ADDIE model was chosen because of its systematic and structured approach, which is highly suitable for technology-based system development, and provides flexibility for continuous evaluation and improvement. This approach also enables researchers to design, develop, and implement *an E-Shop* that is easy to use for SME practitioners. The R&D method with ADDIE allows researchers to produce *prototypes* that can be tested and implemented in a real-world context.

a. Anal*ysis*

During the analysis stage, researchers identified the business and technological needs of Azis Perabot MSMEs. Interviews and observations were conducted to understand the problems faced by MSME players, particularly those related to *digital* product marketing. This analysis aims to explore in greater depth the obstacles faced, such as limitations in promotion through *digital* media and dependence on traditional marketing. In addition, a system requirements analysis was conducted to ensure that the features developed on *the OpenCart platform* could meet Azis Perabot's needs in increasing product visibility and expanding market reach. The data collected will be used to design the right solution for this MSME.

b. Design

After analyzing the requirements, the next step is to design an *E-Shop* system based on *the OpenCart platform*. This design includes a user-friendly interface (UI) to make it easier for SMEs with limited *digital* skills to use the system. In addition, the system design will include an efficient transaction flow, easy product management, and integration with payment systems to facilitate the transaction process. This design also considers important features such as a *digital* product catalog, automatic stock updates, and clear transaction reports. All of these system designs will be tailored to the needs and characteristics of Azis Perabot's SME business.

c. Development

In the development stage, researchers built *an E-Shop Prototype* that was designed using *the OpenCart platform*. This development included the creation of the main features that had been planned, such as a *digital* product catalog, inventory management system, and *online* payment system. In addition, testing is carried out to ensure that the system functions as desired, both in terms of functionality and ease of use. *Prototype* development is carried out by considering technical and functional factors so that it can be easily implemented by MSME players who do not have a strong technical background. The resulting *prototype* is also equipped with features to manage products, monitor sales, and update product information efficiently.

d. *Implement*ation

During the implementation phase, the developed *E-Shop Prototype* was tested at Azis Perabot MSME to ensure that the system worked according to business needs. Testing was conducted in a limited (*offline*) environment to identify any obstacles or problems that might arise when using the system. During implementation, researchers provided training to MSME owners on how to use *the E-Shop*, from product management to transaction settings. *Feedback* obtained from users during the implementation stage will be used to improve the functionality and usability of the system before it is launched more widely.

e. *Evaluation*

An evaluation was conducted to assess the extent to which the developed *E-Shop prototype* could meet the objectives set, namely to increase product visibility and expand the market reach for Azis Perabot MSMEs. The assessment was based on several aspects, including ease of use, customer satisfaction, efficiency in product management, and the impact on product promotion and sales. In addition, the evaluation also includes analysis of user *feedback* to improve existing shortcomings and enhance system features. Based on the results of this evaluation, researchers provide recommendations for improvements and further development steps, including the possibility of integrating *the E-Shop* into a wider *online* network.

2.1 Data Processing Techniques

The data obtained during the study will be analyzed using a qualitative descriptive approach. Data collection will be conducted through interviews and observations. The collected data will be analyzed to assess system performance and provide recommendations for improvement. The evaluation of the system's functionality and usage will form the basis for refining *the prototype* to better suit the future needs of MSMEs.

With the application of the ADDIE model, this article is expected to produce *an E-Shop* that is not only beneficial for Azis Perabot, but also provides guidance for other MSMEs to utilize *digital* technology in developing their businesses in the *digital* era.

RESULTS AND DISCUSSION

This article aims to design *an OpenCart-based E-Shop* as a product promotion medium for Azis Perabot MSMEs. Using the ADDIE (Analysis, Design, Development, Implementation, and Evaluation)

development model, this article produces a *prototype* system designed to meet the needs of MSME product promotion digitization. The following is a description of the results of each development stage.

a. Results

1) Needs Analysis

The requirements analysis stage is a crucial first step in the system development process. At this stage, the article focuses on gaining an in-depth understanding of the business needs of Azis Perabot SMEs, particularly in facing the challenges of product marketing in the *digital* era. Through interviews with SME owners, direct observation of business operations, and relevant literature studies, specific needs were successfully identified.

a) *Current Condition of Azis Perabot SME*

Azis Perabot is a micro, small, and medium enterprise (MSME) engaged in the manufacture of household furniture, such as cabinets, tables, and doors. Currently, the promotional methods used are still traditional, such as word-of-mouth marketing and direct sales in physical stores. This limits the ability to reach customers outside the local area and maximize marketing potential.

Some of the main obstacles faced are:

(1) Limited Access to *Digital* Markets: Azis Furniture products are not yet available *online*, making it difficult for potential customers outside the local area to find out about their products.

(2) Manual Product Management: Inventory management, including product stock and pricing, is done manually, which is prone to errors and time-consuming.

(3) Customer Lack of Awareness of Available Products: The absence of an organized product catalog makes it difficult for customers to obtain information about product specifications and prices.

(4) Difficulty in Conducting Non-Cash Transactions: The payment system currently in use is still limited to traditional methods, such as cash payments or manual bank transfers, which do not support *modern* transactions.

b) *System User Requirements*

Based on interviews and observations, the main requirements that must be met by the E-Shop system can be summarized as follows:

(1) MSME Owner (Admin) Requirements:

(a) *Digital* Product Management: MSME owners need features to add, edit, and delete product data *digitally*. This information includes product name, description, price, and product photos.

(b) Inventory Management: A system that can automatically update product inventory when a sale occurs.

(c) Sales Reports: A feature that provides detailed transaction reports, helping owners evaluate business performance.

(d) Simple Interface: The system must have an interface that is easy to understand and use, considering that SME owners may not have a technical background.

(2) Customer Needs:

(a) Organized Product Catalog: Customers need a *digital* catalog that contains complete information about products, including prices, descriptions, and photos.

(b) Easy Ordering Process: Customers need a simple ordering process, from viewing the catalog to making payments.

(c) Cashless Payment System: *Online* payment features, such as bank transfers, must be provided to support remote transactions.

(d) Trust in the System: Information about products and transactions must be displayed transparently to build customer trust.

c) Technology Analysis

To meet the above requirements, *the OpenCart platform* was chosen as the basis for system development. This choice was based on several advantages *of OpenCart*, such as:

(1) Ease of Customization: *OpenCart* provides a user-friendly interface and features that can be tailored to the needs of MSMEs.

(2) Support for *Digital* Catalogs: *OpenCart* has a built-in feature for displaying product catalogs professionally.

(3) Payment Integration: This *platform* supports integration with various *digital* payment methods, such as bank transfers or other payment gateways.

(4) Cost Efficiency: As *an* open-source *platform*, *OpenCart* allows for system development at a relatively low cost compared to building a system from scratch.

d) *Identification of Required Features*

Based on the needs analysis, the following is a list of key features to be developed:

(1) *Digital* Product Catalog: Displaying complete and structured product information.

(2) Automatic Inventory Management: Inventory will be automatically updated every time a transaction occurs.

(3) *Online* Payment System: Supports cashless transactions for customer convenience.

(4) Sales Reports: A feature to track and analyze sales performance in *real-time*.

(5) *User-Friendly* Management: A system that is easy to use, even for users with minimal technological skills.

e) *Justification of Needs*

This needs analysis provides a strong foundation for the development of the E-Shop system. By understanding the main problems faced by Azis Perabot, the designed system will not only help overcome product promotion challenges but also improve operational efficiency and the competitiveness of MSMEs.

The results of this needs analysis serve as a guide for the more detailed system design phase, ensuring that all features developed are relevant and provide real solutions for Azis Perabot's SMEs.

2) *System Design*

In the design phase, the E-Shop system was designed using the OpenCart platform. The user interface was designed to be simple so that it is easy to use for SME owners who do not have advanced digital skills.

a) Product Catalog Feature: Displays various products such as TV tables priced at IDR 2,500,000.

b) Inventory Management Feature: Ensures that product inventory is automatically updated after a transaction occurs.

c) Sales Report Feature: Provides organized sales data.

In addition, a UML diagram was created to visualize the structure and flow *of the system*:

a) *Use Case* Diagram: The *use case* diagram illustrates the interaction between MSME owners as administrators, customers, and the *E-Shop* system. The main activities supported include product management, catalog review by customers, the ordering process, and payment confirmation. This diagram shows the direct relationship between users and the main features of the system, ensuring that all business and customer needs are met through a simple and intuitive flow.
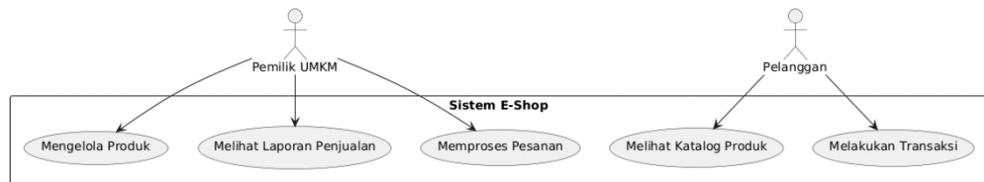
Figure 1. Use case

b) Activity Diagram: The activity diagram illustrates the order process flow from start to finish. Customers begin by viewing the product catalog, selecting items, adding them to the cart, and proceeding to payment. Once payment is confirmed, the system automatically updates the stock and sends a notification to the customer. This diagram ensures that every step in the transaction process runs smoothly and efficiently.

Figure 2. Activity Diagram

c) Class Diagram: The class diagram maps the entire main data structure in the system, such as Product, Category, Customer, and Order entities. Each class includes relevant attributes and relationships, such as product details, category relationships, and customer data. This structure supports organized and efficient data management for all operational aspects.
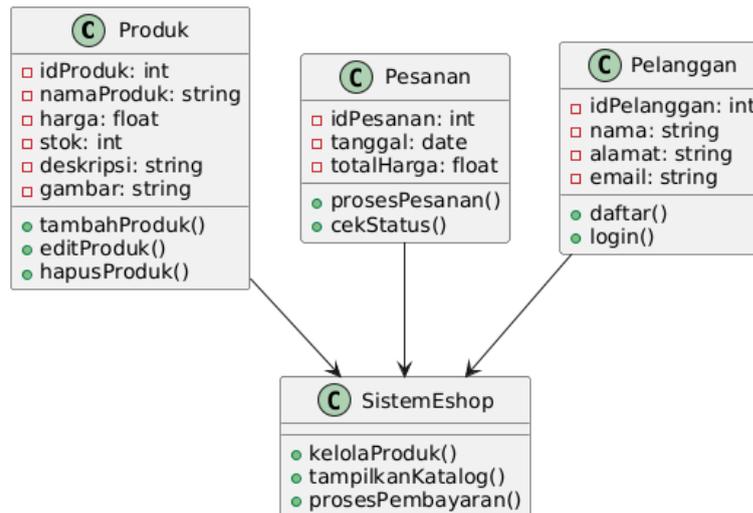
Figure 3. Class Diagram

d) *Sequence* Diagram: A *sequence* diagram describes the sequence of interactions between users and the system in a transaction flow. For example, a customer starts by accessing the catalog, sends a request to the server for product details, and completes the payment. This diagram shows how the system responds to user input in *real time*.
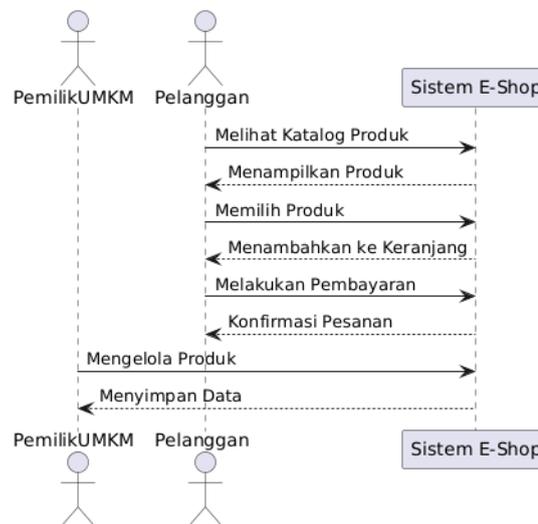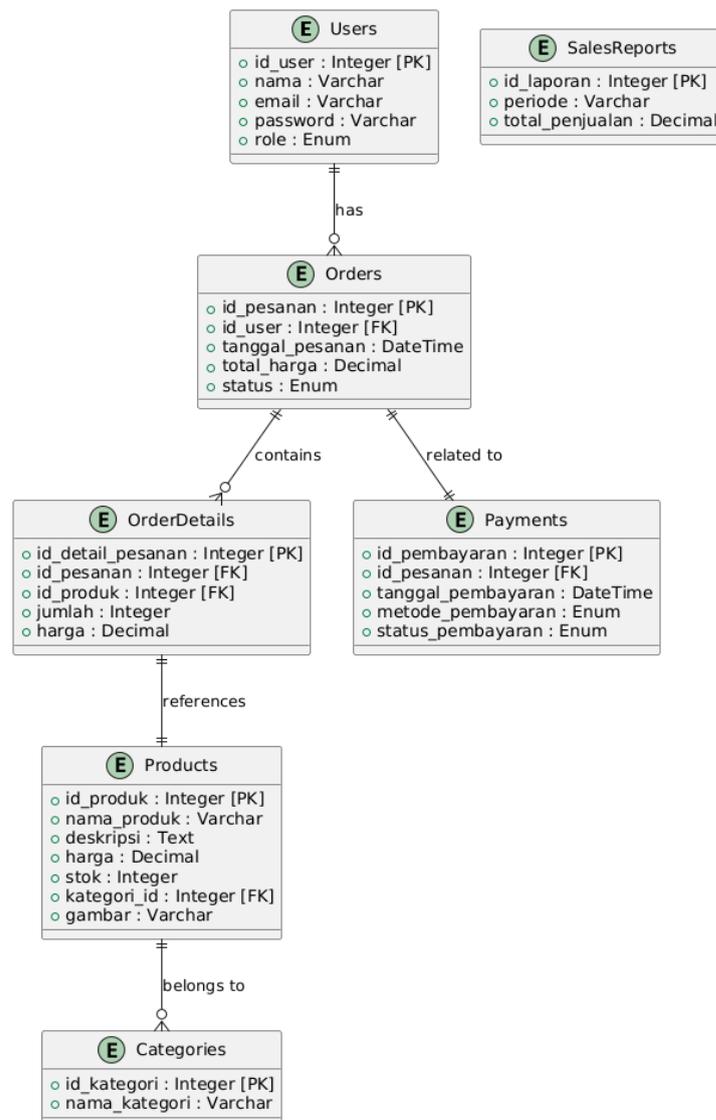

Figure 4. *Sequence* Diagram

e) *Database* Design:

Figure 5. *Database* Design

The database design above includes tables such as products, categories, users, orders, and stock. Each table is designed with important attributes to ensure structured data storage, such as unique IDs, names, descriptions, prices, and stock status. The relationships between tables support integrated data management, such as linking orders with product and customer details.

3) *System Development*

At this stage, the E-Shop Prototype was built using the OpenCart platform. The prototype includes:

a) *Digital* Product Catalog: Products are displayed in a structured manner, making it easy for customers to view price details and descriptions.
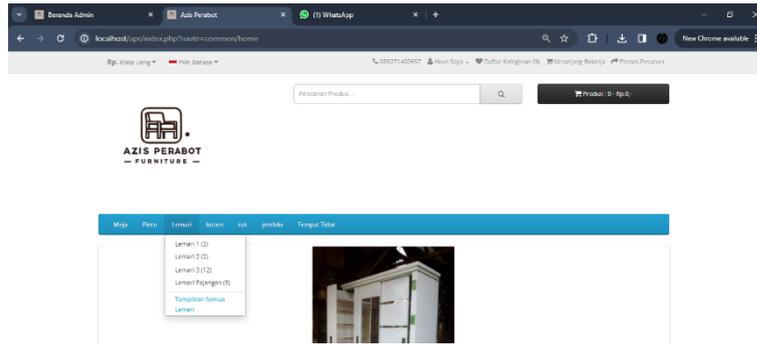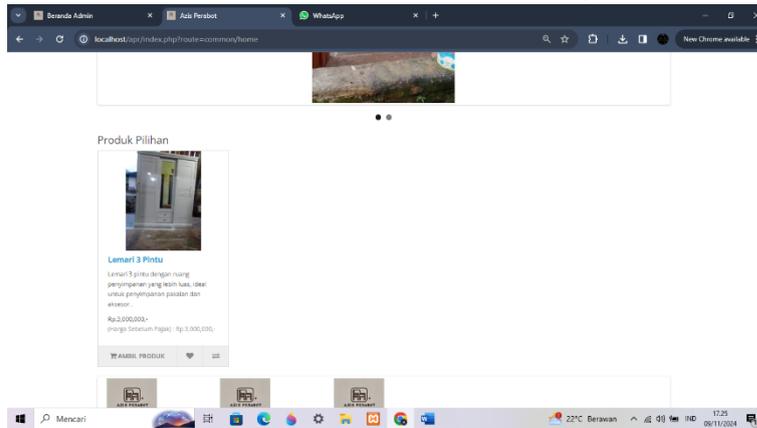
Figure 7. Product Selection Display

Figure 6. Product Item Navbar

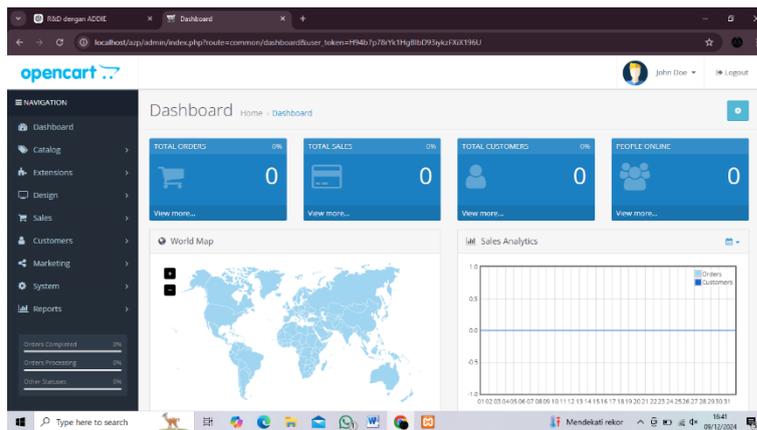b)   Payment System and Purchase *History*: Supports payment methods via bank transfer.
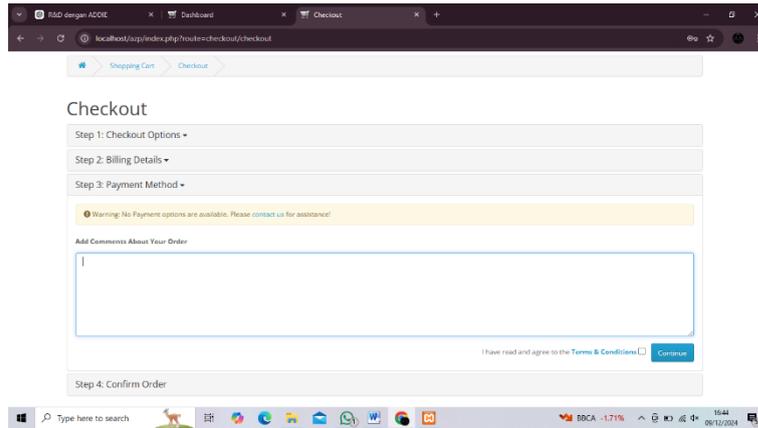

Figure 8. Sales Chart

Figure 9. Payment Methods

c) Product Management: Owners can easily add, edit, or delete products.
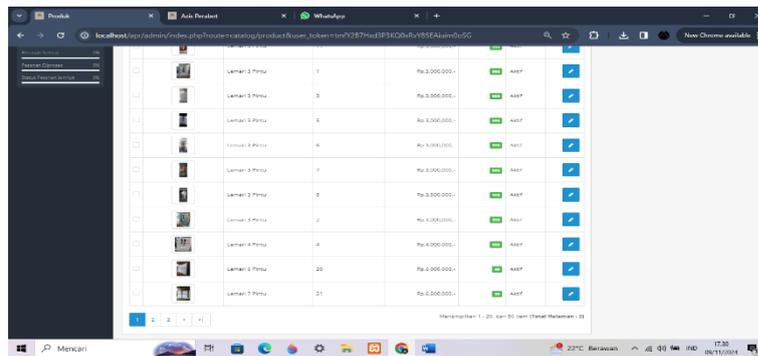

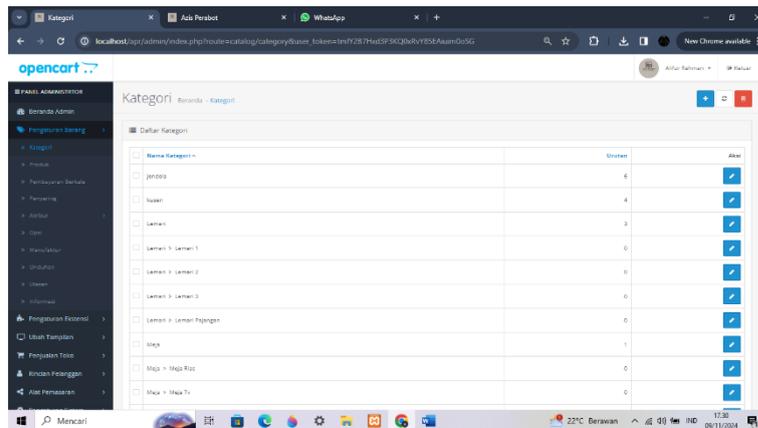
Figure 10. Product Management

Figure 11. Product Category Management

System testing is conducted internally to ensure that every feature functions properly, both in terms of functionality and ease of use.

4) Implementation

The implementation phase is an important step to ensure that the system that has been designed and developed can function properly in a real environment. In this article, implementation is carried out in stages to minimize risk and ensure that the OpenCart-based E-Shop prototype truly meets the needs of Azis Perabot MSMEs.

a) System Testing in a Limited Environment

The E-Shop prototype was tested in a limited offline environment before being launched widely. The objectives of this testing were:

(1) Identify Technical Obstacles: Testing helps detect bugs or malfunctions in the system, such as errors in the transaction process, catalog display, or stock updates.

(2) Evaluate System Performance: System stability was tested to ensure optimal performance, such as response time when accessing the product catalog or processing orders.

The results of this testing will be used as input for further improvements before the system is used in real-world situations.

b) User Training (MSME Owners)

SME owners are given brief training on how to operate the system. Training materials include:

(1) Product Management: How to add, edit, and delete product data, including uploading product images and entering information such as descriptions, prices, and stock.

(2) Order Management: The process of managing customer orders, from receiving orders to confirming delivery.

(3) Using the Admin Dashboard: Navigating the *OpenCart* dashboard to monitor business activities, such as sales reports and product statistics.

(4) System Updates: Steps to update product or system information if needed in the future.

Training is conducted directly with a simulation-based approach, where MSME owners practice using the system with guidance from the development team.

c) Usage Testing by Owners and Customers

After training, the system is tested by SME owners with the involvement of several selected customers. Usability testing activities include:

(1) Customers: Accessing the product catalog, selecting products, and completing transactions through the system. Feedback from customers is used to assess the ease of use and effectiveness of the transaction flow.

(2) MSME Owners: Managing product and order data using the admin dashboard to ensure that the system supports daily operational needs.

d) Feedback and System Improvement

From the trial results, various inputs were obtained, such as:

(1) Customer Suggestions: Some customers requested more detailed product descriptions or a product search feature based on categories.

(2) Technical Issues: It was found that some product images took longer to load, so optimization was needed.

This *feedback* was then used to refine the system before its full launch.

5) System Evaluation

The evaluation results showed that the E-Shop system was able to significantly increase the visibility of Azis Perabot products. MSME owners felt that the system was easy to use and helpful in managing sales. However, the evaluation also found several areas for further development, such as adding more detailed sales analytics features.

b. Discussion

The results of this article show that the development of *the OpenCart-based E-Shop* system has successfully met the needs of Azis Perabot's SME. This system effectively addresses key challenges such as limited access to the *digital* market, error-prone manual stock management, and the absence of a cashless payment system. This success is supported by a needs-based approach through interviews, direct observation, and comprehensive literature studies. The selection *of OpenCart* as a flexible, economical, and easy-to-use *platform* was also a key factor. The implementation process, which involved training SME owners and small-scale system trials, ensured that the system could function optimally and be relevant to daily operational needs.

Going forward, this *E-Shop* system has the potential to increase Azis Perabot's competitiveness and market reach. With the digitization of the product catalog, customers from outside the local area can easily access product information and make *online* transactions. The automation of inventory management and sales reports is also expected to increase operational efficiency and reduce the administrative burden. In addition, this system has the opportunity to be developed further, for example by adding more detailed sales analytics features or a product search system based on categories. This innovation not only provides short-term benefits but also opens up opportunities for future business expansion.

An article by Firdausya and Ompusunggu (2023) shows that digitization has a significant impact on the operational efficiency of MSMEs. *Digital* technology enables businesses to reach a wider market, improve operational efficiency, and increase customer satisfaction. However, *digital* literacy barriers and limited access to technology are challenges that require attention. Support in the form of technical training and infrastructure from the government and related parties is essential to optimize the potential of digitalization among MSMEs.(Firdausya & Ompusunggu, 2023)

The article by Angeline et al. (2022) highlights the importance of MSME digitalization strategies during and after the COVID-19 pandemic. *Digital transformation* through mastery *of digital marketing* and creative content has proven to be the key to reaching new customers while maintaining customer loyalty. This study emphasizes that the implementation of these strategies not only saves MSMEs from losses due to the pandemic but also opens up new opportunities for growth in an increasingly competitive *digital* market. This strategy enables MSMEs to overcome physical limitations caused by the pandemic and enhance their competitiveness in the *digital* era.(Angeline et al., 2022)

The article by Irianto et al. (2022) in Tengklik Village shows the success of the MSME Digitalization program in improving *online* marketing and sales. Through training and socialization, business actors gained a deep understanding of branding and *digital* marketing, including the use of social media and marketplaces. This study proves that digitalization not only increases income but also helps MSMEs adapt to changing market needs more effectively. MSME players in Tengklik Village have also begun to identify consumer needs, determine target markets, and compete more strategically using digital *platforms*.(Irianto, 2022)

Azis Perabot's article, which focuses on the implementation *of OpenCart*, demonstrates a practical approach to overcoming SME operational challenges through ready-to-use technology. This system successfully provides solutions for automatic stock management, *digital* cataloging, and *modern* payment methods that support *online* transactions. Unlike other articles that emphasize technical training, this approach is more directly applicable without requiring advanced *digital* literacy. With this technology-based solution, Azis Perabot has been able to expand its market reach while increasing its operational efficiency.

For Azis Perabot SMEs, the results of this article have significant implications for improving competitiveness and operational efficiency. Digitization using *OpenCart* allows this business to

expand its market beyond local boundaries, making its products accessible to customers in various regions. The *digital catalog* system provides transparency of product information, which helps increase customer trust. In addition, the automatic stock management feature reduces the risk of manual errors, improves inventory data accuracy, and facilitates stock monitoring.

The availability of cashless payment methods provides customers with greater flexibility in transactions, increasing convenience and sales conversion potential. As a next step, Azis Perabot can consider integrating more advanced sales analytics features, introducing social media-based marketing strategies, and improving the *digital* skills of business owners to optimize the potential of this technology. Thus, this digitalization not only provides short-term solutions but also supports the sustainable growth of Azis Perabot in the *digital* era.

CONCLUSION

The development *of an OpenCart-based e-shop* has successfully become a solution to overcome the limitations of traditional promotion faced by Azis Perabot MSMEs. This *platform* is capable of increasing product *visibility*, simplifying stock management, and providing *modern* non-cash payment methods. The test results show that this system is effective in meeting Azis Perabot's operational needs, including simplifying the transaction process and increasing customer access to products.

With this implementation, Azis Perabot can not only expand its market reach but also improve efficiency in business management. However, this system still has room for further development, such as the integration of sales analytics features and product search optimization. This *digital* transformation is expected to serve as a reference for other MSMEs in utilizing technology to increase competitiveness in the *digital* era.

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