



Implementation of customer relationship management system to maintain service quality for customer

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ABSTRACT

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The purpose of this study was to examine the effect of electronic word of mouth, experiential marketing, and brand ambassador variables on purchasing decisions on the Tokopedia application in the West Cikarang region. This sampling technique uses the Lemeshow formula and obtained as many as 300 respondents. The data obtained were analyzed quantitatively by using measuring instruments in the form of validity tests, reliability tests, classical assumption tests, simple and multiple linear regression analysis tests, and hypothesis testing. The test was conducted to determine the effective and relative contribution by using the SPSS version 21 application program for windows. The results of partial statistical analysis show that electronic word of mouth, experiential marketing, and brand ambassadors have a positive and significant influence on purchasing decisions on the Tokopedia application. The results of statistical analysis simultaneously show that electronic word of mouth, experiential marketing, and brand ambassadors have a significant effect on purchasing decisions on the Tokopedia application simultaneously. The results of the R Square value of electronic word of mouth showed a value of 48.4%, experiential marketing showed a value of 67.0%, and brand ambassadors showed a value of 66.0% which means that there is an influence on purchasing decisions on the Tokopedia application in the West Cikarang region.

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INTRODUCTION

The current trend in digital business requires businesses to be able to display their wares online, either on their own websites or on preexisting platforms that enable e-commerce, and to be able to facilitate digital transactions between buyers and sellers (Ukko et al., 2019). Businesses can choose to display their wares online either on their own websites or on preexisting platforms that enable e-

commerce. The development of transactions in e-commerce has led to a very large acceleration in the transaction process, which has led to this development (Gawer, 2021). This development was brought about as a result of the progression of transactions. This, in turn, leads to increased competitiveness in the world of corporations, which, in turn, leads to increased development in the world of information and communication technology (Danuri, 2019). Because of this, there is now competition in the digital business world (Nadeem et al., 2018), with the internet acting as a go-between in the operations of the company's various businesses. As a consequence of this (Cakranegara et al., 2022), every business must commit themselves to continuously enhancing their capabilities and performing their task to the highest possible standard by drawing upon all of the resources at their disposal (Ratmono et al., 2022). Customers are pampered by the fact that they do not need to move from their place, whether they are working, unwinding at home, or even when they are on vacation; as long as customers have an internet connection (Dewantara, Cakranegara, et al., 2022), they are able to view, compare, and decide what to purchase from a variety of retailers online. Customers are pampered by the fact that they do not need to move from their place. It has become increasingly difficult for businesspeople to provide services that are capable of satisfying the requirements set forth by their clientele in order to maintain a foothold in today's cutthroat commercial environment. This is because customers are becoming more picky and have higher expectations regarding the level of comfort they experience (Sari et al., 2020). By analyzing the patterns of behavior exhibited by consumers and the requirements they have, a business hopes to improve the quality of the services it provides to clients, strengthen the loyalty of existing customers, and increase income (Amirullah et al., 2021). Researching customer preferences and patterns of behavior is one way to achieve this goal. Because of the heightened level of competition in the business sector, many companies are either adopting or considering developing a proper strategy to triumph over their rivals. One of the available options is to bring the company and its customers into as close of a relationship as is practicable by establishing a service system that is both quick and efficient. administration that is appropriate in order to enhance the level of service provided to customers One of the most difficult aspects of running a business is keeping existing customers happy (Arifin et al., 2022). If a customer is dissatisfied with the services provided and ultimately decides to stop doing business with a particular actor, that actor's business must invest time and resources into winning back the customer's confidence and loyalty.

Client improvements are the primary goal of every business in order to evaluate service business strategies and processes to keep customer loyalty. Many business establishments continue to exist in the business convention process, for example, from the promotion process to the transactional process, complicating business rivalry in the digital era. For instance, at the business location of Kiara Gypsum, which is a sole proprietorship that operates in the industry of gypsum sales and provides gypsum and gypsum lists in a range of forms and carving patterns, one may find an example of this. When marketing products that have a long shelf life, it is essential to increase both the customer loyalty of existing customers and the buyer confidence in the products themselves (Asir et al., 2022). Customers with larger projects will receive discounts and guarantees, and any damage that occurs will be repaired at no additional cost to the customer. Currently, in terms of the services that are provided to customers, they always provide appropriate product suggestions that are relevant to projects from customers, and customers with larger projects will receive these benefits. The proprietor is aware that the operations of running a business involve more than just buying and selling items; they also involve other factors that are equally important, such as maintaining positive connections with existing customers. An individual or group of individuals who buys a product, whether it be a physical good or a service, based on their own decisions, taking into account a variety of criteria such as price, quality, location, service, and so on is considered to be a customer. Customers can come in the form of individuals or groups. It is now believed that the availability of technology as a facility will make it possible for the establishment of systems (Sudipa et al., 2020) that will increase customer service and loyalty among both new and existing customers.

The research objective describes the necessity for an information system that employs the CRM method in order to fulfill the requirements of the customers and keep their continued patronage. CRM, or customer relationship management, is a corporate strategy that focuses on system features that make it simpler and more pleasant for customers to complete transactions. This strategy is utilized to sustain client loyalty (Dubina et al., 2020). CRM refers to a strategy that entails the gathering of data, its subsequent analysis, and use in the course of interactions with customers. By employing the information to establish superior characteristics of the system that will make it simpler for clients to complete buy transactions, we may use this knowledge to improve the system. Implementing an e-customer relationship management system is one of the tactics that can be utilized to determine what needs consumers have and also to attract, keep, or retain consumers so they remain loyal to the firm (Dewantara, Widiawati, et al., 2022). Therefore, the goal of this research is to develop a CRM application that will make it simpler for businesses to identify superior features that can be adapted to meet the requirements of individual customers. These features may include product recommendation features, promotional features, and transaction features. Additional goals include the acceleration of service transactions to consumers, the improvement of service quality for customers, and the simplification of sales transactions for businesses.

RESEARCH METHOD

Customer Relationship Management

Customer Relationship Management (CRM) is a method that can be used to both bring in new customers to buy the company's products and also keep old customers so that they can continue to assist in the marketing process for the company's products. New customers can be enticed to buy the company's products by offering discounts or other incentives to do so. It is possible to bring in new consumers and keep hold of existing customers by employing a customer management system that makes use of the Customer Relationship Management (CRM) method (Kumar & Reinartz, 2018). This enables the customers to participate in every marketing process that is carried out by the company. CRM stands for customer relationship management and refers to a type of software that assists businesses in gathering and storing client data as well as establishing two-way partnerships. Nevertheless, customer relationship management (CRM) today focuses a greater emphasis on altering company policies and procedures in order to enhance sales and customer retention throughout the organization's many business lines. CRM stands for customer relationship management, and it is a combination of business procedures and technology that aims to understand the company's customers from a variety of viewpoints in order to differentiate the company's products and services in a competitive market. A concentrated effort to improve client identification, acquisition, and retention is at the heart of customer relationship management (CRM). Its primary objectives are to raise levels of customer contentment and loyalty, and as a direct result, to boost sales to the company's existing client (Khodakarami & Chan, 2014). It is anticipated that, once the Customer Relationship Management approach has been implemented within this customer service information system, the display of information and services will be able to occur in a manner that is both more quickly and easily. In particular, CRM is divided into stages (Wongsansukcharoen, 2022).

1. Get new customers (Acquire): New customers are obtained by providing easy access to information, new innovations, and attractive services.
2. Increase customer value (Enhance): The company seeks to establish relationships with customers by providing good service to its customers (Customer service).
3. Maintaining existing customers (Retain): Maintaining profitable customers, by offering what is needed by specific customers not what is needed by market customers, because the value of a product or service for customers is the proactive value that best suits their needs. CRM consists of 3 types of activities, viz (Hidayat, 2014):

- a. Operational : Operational CRM relates to the business functions of a company which includes customer service, order management, invoicing/billing, management and sales automation.
- b. Analytical : Analytical CRM is an activity that includes storing, transferring, processing, interpreting and reporting consumer or user data, which then analyzes what they need.
- c. Collaboration : Collaboration CRM is an activity to incorporate all the necessary communication, coordination and collaboration between vendors and customers.

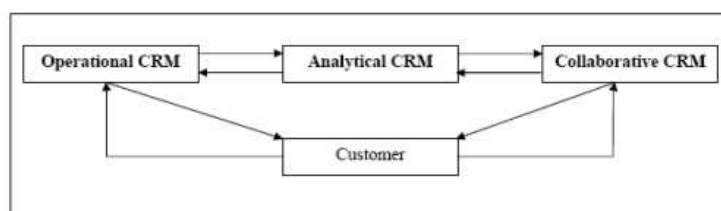


Figure 1. CRM activity (Hidayat, 2014)

Research Flow

The stages of research can be helpful to researchers in formulating problems through data collection to identify problem identification so that solutions can be formulated by analyzing user needs that can complement system feature requirements when the CRM system is being implemented at a later stage. The progression of the research is depicted in Figure 1 which may be found below.

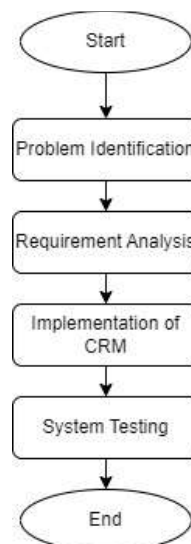


Figure 2. Research flow

According to Figure 1, the stages of problem identification are obtained from the observation and interview process in order to obtain research data related to the company's still conventional business processes, beginning with promotional methods, transactional processes, and how to provide promotions and discounts to customers. Following problem identification, a needs analysis

is performed to change the traditional problems that are used so that they can be switched to a computerized procedure. It is also beneficial to be able to identify CRM features that can be used to help companies with sales transactions and customers with order transactions, such as product recommendation features, discount features, and transaction features. The final stage involves verifying the CRM system's functionality using the Blackbox testing technique to ensure that no faults or system errors occur.

RESULTS AND DISCUSSIONS

System Requirement Analysis

In the system requirements analysis phase, a business process analysis is performed on previously executed processes, and a system flow diagram is used to depict a computerized business process. There is a system flow diagram analysis for the promo feature process and transaction recording, which are two business processes that are still performed manually based on the findings of the research site's problem identification.

1. System Flow Diagram of Promotional Process Features

This promo feature is utilized by company administrators to provide customers with information about ongoing promotions. The system flow diagram for the promotional feature is depicted in Figure 3.

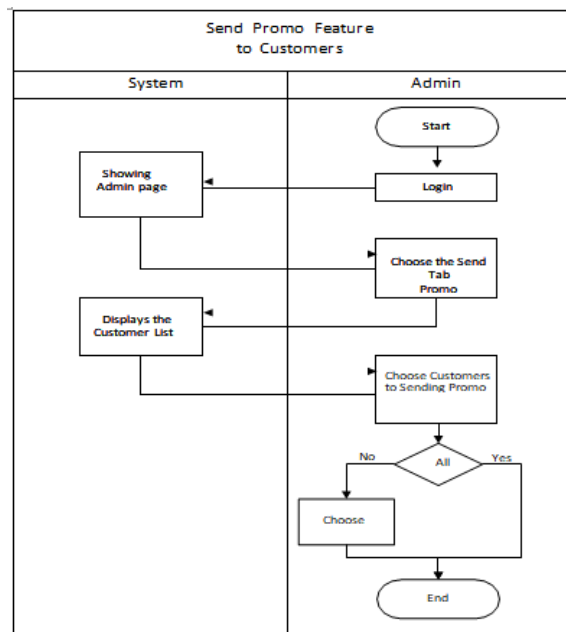


Figure 3. System Flow Diagram of Promotional Features

Based on Figure 3, the flow of the promotional feature business process can be described as follows:

- Login as an administrator to the system.
- The administrator picks the client tab, which displays a list of customers.
- The Administrator can then opt to send promotions to all consumers or to select clients alone.

2. System Flow Diagram of Transaction Process

Order transactions can be recorded in the system so that they can be stored and the owner can receive monthly and annual reports regarding products that are of interest to customers. Figure 4 below illustrates the system flow diagram for transaction features.

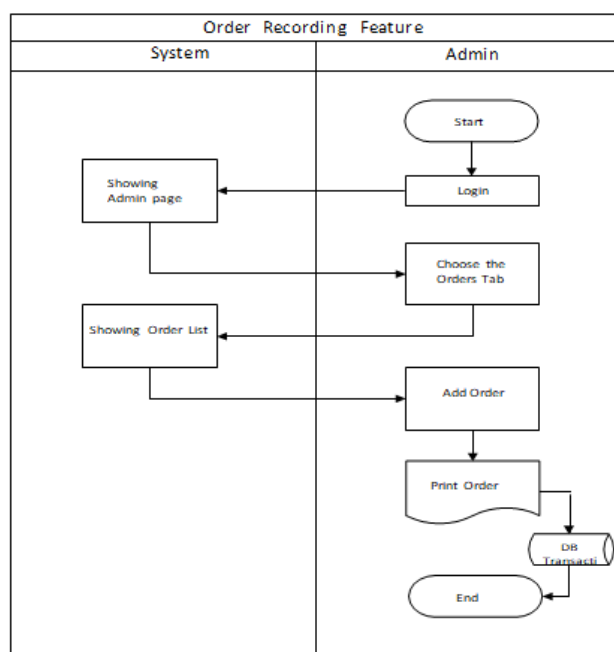


Figure 4. Order recording system flow diagram

On the basis of Figure 3, the flow of the transaction feature business process can be described as follows:

- a. Administrators log into the Internet.
- b. The administrator then navigates to the orders tab.
- c. The administrator can add order information to the list of orders.
- d. The inputted order information will be kept in the transaction database.

Database Design Analysis

Database design analysis utilizing Conceptual data model Conceptual (CDM). The CRM application's data model consists of five tables: user table, customer table, product table, project table, and transaction table. The image depicts the relationships between tables. Figure 5 demonstrates the CDM architecture of the CRM system.

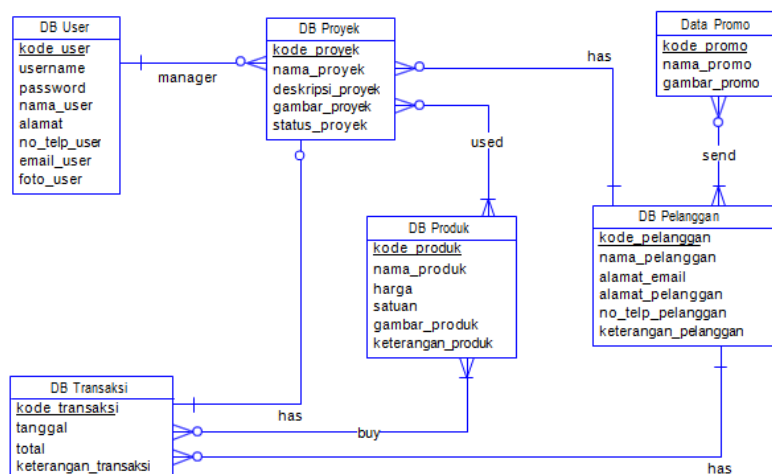


Figure 5. Conceptual data model of system CRM

The following is an explanation of the Conceptual data model in customer relationship management applications.

1. The user entity has a managing relationship to the project entity, where each time an additional project occurs, it records. The cardinality of the relationship is one to many, that is, a user can record a lot of project data, while one user records one expenditure data.
2. Project entities have relationships using to product entities with many to many relationship cardinality, one project can use a lot of product data. Likewise, product data is used at a minimum of zero and a maximum of a lot of project data.
3. The Transaction entity has a has relationship on the project entity. The cardinality of the relationship is one to one where transaction data has one project data.
4. The transaction entity has a purchase relationship to the product entity. The cardinality of the relationship is many to many where one transaction data buys a lot of product data and one product data buys a lot of transaction data.
5. The project entity has an owned relationship with the customer entity. The cardinality of the relationship is one to one where each project data belongs to one customer.
6. The customer entity and the transaction entity are linked by a possessing relationship with the many-to-one relationship cardinality, that is, each transaction has one customer and one customer can have many transactions.

The customer entity has a send relationship with the promo entity with many to many cardinality and mandatory customer on promo, that is, each promo data is sent to many customer data.

Implementation of Customer Relationship Management (CRM)

During the stage of CRM implementation, it is modified according to the findings of an analysis of the functional requirements of system features. The CRM application has a number of features that, when deployed, make it simpler for system administrators to manage the many different kinds of procedures that are carried out within the system.

1. Login Interface Page

The Login page is where firm administrators enter the system. According to what has been registered in the system, the user inputs the username and password. The administrator then clicks the Login button. Figure 6 below displays the login page.

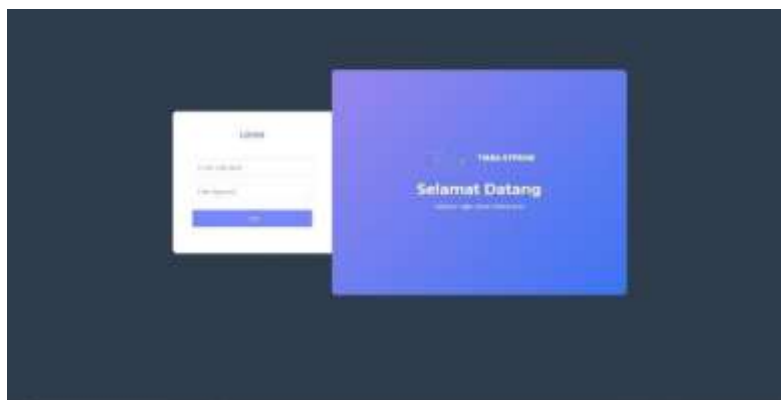


Figure 6. Login interface page

2. Dashboard Interface Page

If the previous login was successful, the dashboard page of the system will be displayed. This part of the dashboard contains statistics regarding the number of customers, product data, project data, and transaction data. In addition, there is a product and sales diagram as depicted in Figure 7.



Figure 7. Dashboard interface page

3. Product Interface Page

After logging in as an admin to the system, the product page is displayed. There is a table for the product list on this page, and the administrator has the ability to add product data, view product data details, and change product data. Figure 8 provides a glimpse of the product data page that can be found below.



Figure 8. Product interface page

4. Project Interface Page

Project page after logging in as an administrator. On this page, the table for the project list, the administrator can add project data, view project data details, and modify project data. Figure 9 below illustrates the project data page.



Figure 9. Project interface page

5. Promotional Interface Page

On the promo page, there is a list of promotions that can be forwarded to consumers that have just been added. Some modifications were made to the banner that was displayed on the customer page. The banner for the home page and the banner for the promotion page are the two that can be set. Figure 10 provides a look at the promotional page that can be accessed.



Figure 10. Promotional interface pages

6. Transaction Interface Page

The page that displays transaction data that has been added is called the transaction data page. The administrator of the place of business can search for transaction data, view details of existing transaction data, and enter new transaction data all from this page.



Figure 11. Transaction interface pages

System Testing

System testing uses blackbox testing throughout. This testing method verifies system functionality by assessing if it is executing legally and according to the scenario on each CRM application feature page (Wiratama et al., 2022) (Cahyanto et al., 2022). A test scenario based on user requests checks each menu button function and process to guarantee that the system does not display an error message when accessed. Table 1 shows blackbox testing results.

Table 1. Blackbox testing scenarios

No	Fitur Sistem	Scenario Result	Description of testing
1	Login Page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected
2	Dashboard page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected
3	Product Interface Page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected
4	Project Interface Page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected
5	Promotion Interface Page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected
6	Transaction Interface Page	Success	From the test results it was found that the system functionality was running well and the menu buttons were functioning as expected

Based on table 1, blackbox testing showed that all system functionalities worked as expected and could be continued during system implementation.

CONCLUSION

The Customer Relationship Management (CRM) system has been successfully implemented in companies to make it easier for company administrators to manage transactional processes, manage product management, manage flagship projects, and manage promotions to customers so that they are aimed at enhancing service for prospective new customers and retaining the loyalty of existing customers. Customer Relationship Management's purpose in promotion is to maximize customer reach by implementing a computerized system so that, beginning with the process of storing

documents, processing data into information is more structured and answers more swiftly to customer inquiries. At the system testing stage, blackbox testing was conducted for six system functionality testing scenarios, with the result that the complete system ran as expected and was valid for all primary menu functions, allowing it to be developed at the implementation stage.

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