IMPROVEMENT OF SERVICE BASED ON QUALITY ASSESSMENT OF SERVICE AND COMPETITOR ANALYSIS IN PHARMACY WIRA PRIMA WITH CUSTOMER RELATIONSHIP MANAGEMENT APPLICATION

Rezky Faizal[1], Utami Dewi Widianti[2]

[1,2]Informatics Engineering – Indonesian Computer University
Jl. Dipatiukur No. 112-114, Coblong, Bandung, West Java
E-mail : rezkyfaizal444@gmail.com[1], utami.dewi.widianti@email.unikom.ac.id[2]

ABSTRACT

Pharmacy Wira Prima is a company engaged in the field of pharmaceuticals, especially as a retail company that sells drugs. Pharmaceutical services to be provided by pharmacies wira prima, among others, these pharmacies serve the purchase of drugs from both prescription and non-prescription, as well as counseling services. Problems experienced Pharmacy Wira Prima is about the complaints of existing services. Customers have different complaints such as drug information counseling services, customers complain about the counseling are delayed from a specified time and complaints about the lenght of time customers in waiting for prescription drugs. These complaints can not be conveyed properly, the patient's complaints are usually delivered to the dispensary or to the cashier at the time of the patient's payment transaction. This results in decreased quality of service and customers being poorly served so they switch to competitors.

The solution of the problem is to build an information service improvement system with Customer Relationship Management approach. Customer Relationship Management (CRM) is an effort to manage corporate relationships with customers so that the company can better understand the character and needs of its customers. CRM approach uses dynamic CRM framework. This system uses servqual method is a method of measuring the quality of service based on the gap value between customer expectations of service with the actual service they received. Servqual method is presented in the form of questionnaires, in addition so that customers do not switch to a competitor required five force porter method based on analysis on competitors.

Based on the results of black box testing and user acceptance testing (end users) it can be concluded that the built system can be received by users and has assisted the director in providing recommendations to the Director in service improvement based on the assessment of service quality and competitor analysis on the company.

Keyword : Customer Relationship Management, Service, Pharmacy, Dynamic Framework, Servqual, Five Force Porter

1. INTRODUCTION

Pharmacy Wira Prima is a company engaged in the field of pharmaceuticals, especially as a retail company that sells drugs. Pharmaceutical services to be provided by pharmacies wira prima, among others, these pharmacies serve the purchase of drugs from both prescription and non-prescription, as well as counseling services.. Provision of drugs either sold freely or restricted to all community groups. There are two types of customers: customer type and individual customer. Service system at Pharmacy is a service system oriented to customer satisfaction by providing environment (place, facility and person) pharmacy conducive to consumer's comfort. The company was established since December 1, 1993. Pharmacy Wira Prima address Jl. Papandayan No.13 Maktal Garut.

Based on the interview with Drs. H. Inga Palandra as Pharmacist and Owner of Pharmacy Facilities [1], in the service given by pharmacies still there are complaints in the existing service. Based on the questionnaire (appendix C-I) customers have different complaints such as drug information counseling services, customers complain about the slow counseling hours of the time, complaints about the long waiting time of prescription services. These complaints can not be conveyed properly, the patient's complaints are usually delivered to the dispensary or to the cashier at the time of the patient's payment transaction. Based on (Appendix C-I) this results in the service provided by the pharmacy not in accordance with what is expected by the patient, so that the customer was not known whether in the next timeframe will come back again for treatment or not. If the service is good then the customer will come back. Low quality will cause dissatisfaction in patients, not only patients who seek treatment in Wira Prima but also affect others. Because disappointed

patients will tell at least 15 other people (Lupiyoadi and Hamdani, 2006). As a result, the condition causes the quality of service to decline as well as the customers to be poorly served and switch to competitors. Based on the interview with Drs. H. Inga Palandra as Pharmacist and Owner of Apotik Sarana [1] and based on data of customer percentage period (appendix C-II), within a certain period there is a decrease in the number of subscribers. As a result, the reduced number of subscribers has also resulted in lower company revenues. In addition to the increasing competition in the field of health services, the company must strive in improving its competitiveness in the face of its main competitors with different advantages, competitor pharmacies wira prima in the area of arrowroot, Pharmacy Baiturrahman and Pharmacy Bhakti Indonesia Power. Attempts to determine competitiveness with competitors can be achieved if the company knows what factors drive customers against competition from newcomer threats, competitors from similar businesses, supplier bargaining power, consumer bargaining power, and the threat of substitution for health services.

Customer Relationship Management (CRM) [2] is a corporate strategy used to indulge customers not to turn to competitors. A pharmacy should have a good service to make customers comfortable for treatment, because the service is one strategy to retain customers or to attract new prospects. Based on the problems that have been described above, it takes a Customer Relationship Management Information System at Pharmacies Wira Prima web-based to facilitate patients in assessing the service of pharmacies and pharmacies can also monitor the complaints of services provided by customers in order to make improvements to the service complained accordingly With what is expected of the customer as well as the competitor's analysis of the company in the field of similar health services. For that he made the solution of an Information System “Improvement of service Based on Quality Assessment of Service and Competitor Analysis At Pharmacy Wira Prima With Customer Relationship Management Application”.

1.1. Basic Concepts of CRM

Customer Relationship Management is a business practice focused or customer oriented. For companies engaged in information technology, the term CRM is used to describe the various software applications used to automate the functions of marketing, sales, and service.

The essence of CRM's understanding is how a company or business recognizes customer behavior, customer needs, and then builds and implements a better business transaction to enhance new customer acquisition capabilities and improve the ability to maintain existing customers [2].

1.2. Types and Rankings of CRM

The following is the type and level of Customer Relationship Management.

1. Operational CRM is related to the business functions of a company that includes customer service, order management, invoice or billing, sales management and automation.
2. Analytical CRM is an activity that includes storing, moving, processing, deciphering and reporting customer or user data, which then analyzes what they need.
3. Collaborative CRM is an activity to combine all necessary communication, coordination and collaboration between vendors and customers. The main objective is to provide added value and expand customer loyalty to other customers who are still not at the level of customer loyalty. Collaborative CRM also includes an understanding or awareness that a loyal customer can be a magnet for other customers.

1.2. Stages In CRM

Implementing a good CRM concept is organizing CRM processes around customers and not just on internal corporate functions. There are three stages in CRM, namely:

1. Acquire is a stage of acquiring customers. Through this stage can provide an assessment to the company by assessing the first impression of the company. If the member has a good assessment of the company, then the transaction will be able to run well.
2. Enhance is a process whereby a company builds a good relationship with members. By listening to complaints from members and receiving member's suggestions is an effective way of building relationships with members.
3. Retain is the stage where the company tries to maintain relationships with members, in other words get members and then maintain relationships with them. In order to maintain a continuous relationship and maintain relationships with members, the company must use a view that uses members by providing support services and applications.

2. RESEARCH CONTENTS

2.1. Analysis of Customer Relationship Management at Pharmacies Wira Prima

In the system to be built later manggunakan type Analitical CRM. With Analitical CRM the process of disistem provides the results of analysis of complaints entered by the patient to the system and later the Director and Chief Pharmacist can take appropriate steps to improve the quality of service that complained customers.

Based on the problems that have been described, it is necessary to have a Customer Relationship Management System that helps provide recommendations to the Director in service improvement based on service quality assessment

that is not in accordance with customer expectations and helps the Director to keep customers from switching to competitors based on analysis on competitors, therefore The steps to be taken are focused on the Relationship Phase. The following is an analysis of the Framework of Dynamic CRM:

1. Phase Acquisition
   Acuisition phase is the stage where the company tries to get to know its customers by way of customer data input and input of complaint data. Input customer data is done by the admin and input data complaints made by the customer. The Director can find out the company's registered customers and complaints. In this phase will apply the proposed business rules beforehand is the filling questionnaire by the customer can be done through the system and may at any time.
2. Retention phase
   Retention phase is the stage where the company conveys information to the customer. Information gained by customers include information about the company, complaint filing information. Information on the type of service being run can be received directly from the customer system.
3. Expansion phase
   Expansion phase is a phase where companies get information from the analysis that can then be used to help the company. This stage is done by competitor analysis using five forces porter model and in improving service quality at pharmacy using servqual method. The complaint data is then analyzed to determine which service is the most complained of which gets a negative score based on the calculations performed using the servqual method and also see if from the complaint there is still a complaint about the service that has been repaired beforehand, if there is still improvement that has been done Not in accordance with what is expected by the customer and the Pharmacist must repair the service again.

Based on the analysis of Framework of Dynamic CRM, it can be concluded what features will be built on Wira Prima Pharmacy in accordance with the Framework of Dynamic CRM analysis can be seen in Figure 1.

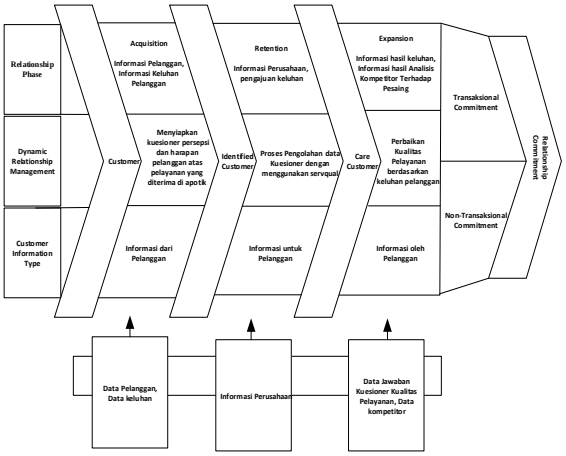


Figure 1. Framework of Dynamic CRM

2.2. Use Case Diagram

In the system there are four users: Chief pharmacist, director, and customer. The task of the three actors can be seen in Use Case Diagram in Figure 2.

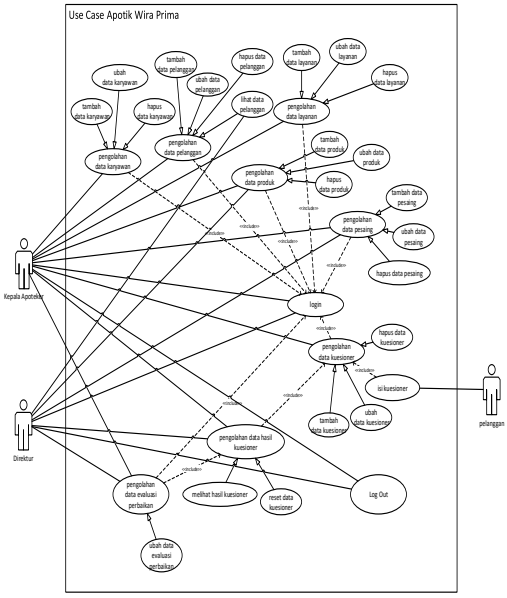


Figure 2. Use Case Diagram

2.3. Class Diagram

There are three types of classes in the system, namely Boundary class, Control class, and Entity class. The Boundary class is the class used to build the system interface. The Control class is a class that is used as the place for all existing processes in the system and also the validator that checks the validation of incoming data, and the Entity class is the class used as the data container or the data representation itself.

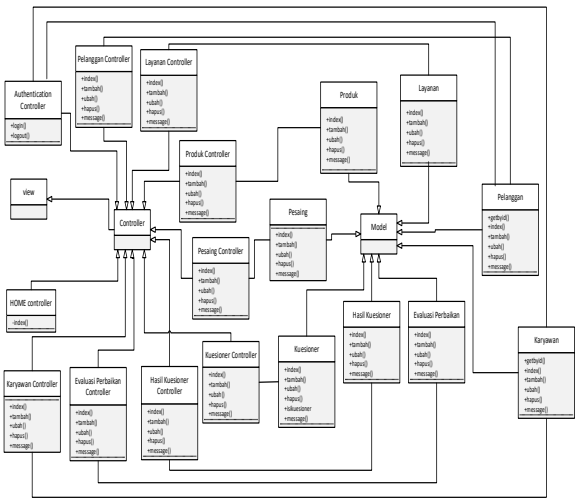


Figure 3. Class Diagram

2.4. Relation scheme

Relation Scheme describes the interconnected data between multiple data and their constraints

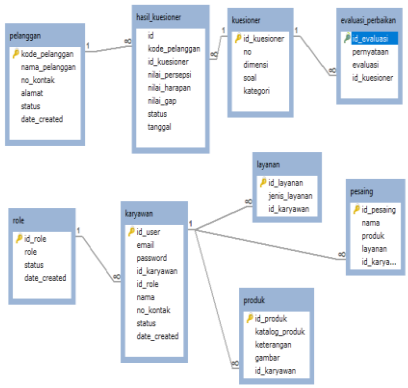


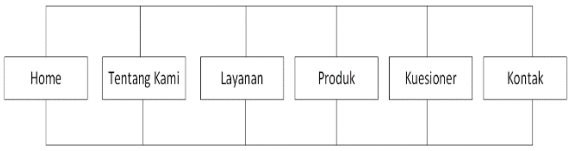
Figure 4. Relation Scheme

2.5. Menu Structure Design

Design The menu structure is designed to provide the functions that will be used in information systems to be built.

2.5.1 Customer Menu Structure

Customer menu structure is a menu structure that has the main function as a medium for customer activity in the system. Customer menu structure can be seen in Figure below.



Gambar 5. Struktur Menu Pelanggan

2.5.2 Head Menu Structure of the Pharmacist

The menu structure of the Pharmacist Head is a menu structure that has the main function as a CRM system processing to be built. The structure of the Pharmacist Head menu can be seen in Figure below.

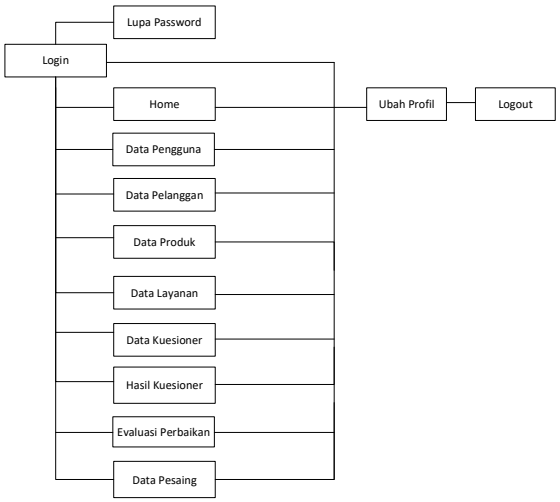


Figure 6. Head Menu Structure of the Pharmacist

2.5.3 Director Menu Structure

The Director menu structure is a menu structure that has a primary function as a Director Monitoring activity within the system. The menu structure of the Director can be seen in Figure below.

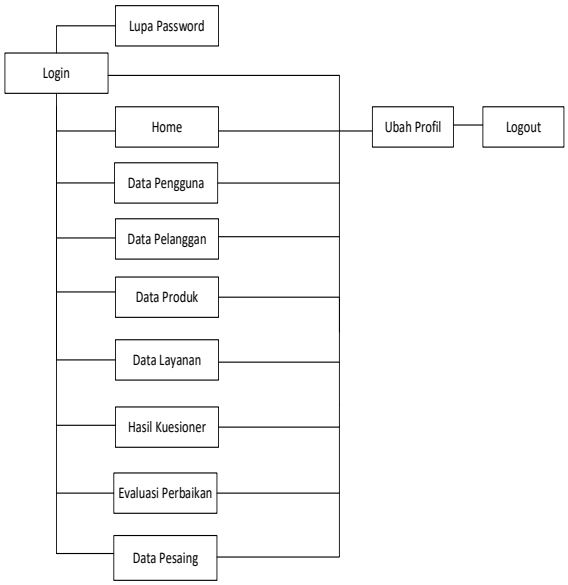


Figure 7. Director Menu Structure

2.6 Interface Implementation

Implementation of the interface is done based on each view of the development of service improvement based on the assessment of service quality and competitor analysis in pharmacy wira prima with the application of customer relationship management with coding in the form of program files. Display interface of the built interface is divided into 3 namely for Head Pharmacist, Director, and Customer.

2.6.1. Implementation of Pharmacist Head Interfaces

Implementation of interfaces contained in software intended for Pharmacist Head can be seen in the following table.

Table 1. Implementation of Pharmacist Head Interfaces

Page	Description	File Name
Login	The page used to login to the system	login.php
Lupa password	The page used when the Chief Pharmacist forgot the password	forget.php
Home	The main page after the Chief Pharmacist managed to login	home.php
Data Karyawan	The page used to process employee data	karyawan.php
Data Pelanggan	Pages used to process customer data	pelanggan.php
Data Layanan	The page used to process the data services available	layanan.php
Data Produk	The page used to process the product data available.	produk.php
Data Pesaing	The page used to process competitor data	pesaing.php
Data Kuesioner	The page used to process the questionnaire data	kuesioner.php
Hasil_kuesioner	The page used to process the answer questionnaire data	hasil_kuesioner.php
Evaluasi Perbaikan	The page used to process the evaluation evaluation data	evaluasi.php
Ubah Profil	The page used to change the profile data	profil.php
Logout	Used when going out from the Pharmacist Header Page	logout.php

2.6.2. Implementation Interface Director

Implementation of interfaces contained in software directed to the Director can be seen in the following table.

Table 2. Implementation Interface Director

Page	Description	File Name
Login	The page used to login to the system	login.php
Lupa password	The page used when the Chief Pharmacist forgot the password	forget.php
Home	The main page after the Chief Pharmacist managed to login	home.php
Data Karyawan	The page used to process employee data	karyawan.php
Data Pelanggan	Pages used to process customer data	pelanggan.php
Data Layanan	The page used to process the data services available	layanan.php
Data Produk	The page used to process the product data available.	produk.php
Data Pesaing	The page used to process competitor data	pesaing.php
Hasil_kuesioner	The page used to process the answer questionnaire data	hasil_kuesioner.php
Evaluasi Perbaikan	The page used to process the evaluation evaluation data	evaluasi.php
Ubah Profil	The page used to change the profile data	profil.php
Logout	Used when going out from the Pharmacist Header Page	logout.php

2.6.3. Implementation of Customer Interface

Implementation of the interface contained in software intended for customers, can be seen in the following table.

Table 3. Implementation of Customer Interface

Page	Description	File Name
Home	The main page of the website pharmacy wira prima	home.php
Tentang Kami	The page used to view the company profile	about.php
Layanan	The page used to see about the service company	layanan.php
Produk	The page used to see about the company's products	produk.php
Kuesioner	The page used to fill in the questionnaire data	kuesioner.php
Kontak	The page used to fill contact data	Contact.php

2.7. System Testing

Testing the system is the most important thing that aims to find errors or deficiencies in information systems tested. Testing the system intended to determine the performance of information systems that have been made in accordance with the purpose of designing information systems. Testing this system using black box testing and User Acceptance Test (UAT).

2.7.1. Black Box Testing

Black box testing focuses on the functional requirements of the software.

Table 4. Scenario black box testing

Test Case	Test Details	Type of Testing
Login	Login user	Black Box
Lupa password	Forget password	Black Box
Data Karyawan	Add data karyawan Edit data karyawan Find data karyawan Delete data karyawan	Black Box
Data Pelanggan	Add data pelanggan Edit data pelanggan Find data pelanggan Delete data pelanggan	Black Box
Data Layanan	Add data layanan Edit data layanan Find data layanan Delete data layanan	Black Box
Data Produk	Add data produk Edit data produk Find data produk Delete data produk	Black Box
Kuesioner	Add data kuesioner Edit data kuesioner Find data kuesioner Delete data kuesioner	Black Box
Hasil Kuesioner	Find hasil kuesioner Reset hasil kuesioner	Black Box
Data Pesaing	Add data pesaing Edi data pesaing Find Data Pesaing Delete data Pesaing	Black Box
Data Evaluasi Perbaikan	Add data evaluasi perbaikan Edit data evaluasi perbaikan Find Data evaluasi perbaikan	Black Box

2.7.2. User Acceptance Test (UAT).

It can be said UAT as a test find a new defect (defect) not found by the developer .. The description and testing procedures can be seen in the following table.

Table 5. Scenario UAT testing

No	Description Testing	Procedure Testing
1	User Login	1. Enter your username and password 2. Click the login button
2	Testing added employee data	1. Click the add data button 2. Enter id, name, email, position, contact number, status 3. Click the save button
3	Testing edit employee data	1. Click the edit button 2. Edit the attributes to be changed for id, name, email, position, contact number, status 3. Click the save button
4	Testing employee data search	1. Enter the employee id to search for in the search field. 2. Click the enter button on the pc keyboard
5	Testing delete employee data	1. Enter your username and password 2. Click the login button
6	Testing add Customer data	1. Click the add data button 2. Enter id, name, contact, address, status 3. Click the save button
7	Testing edit customer data	1. Click the edit data button 2. Edit the attributes to be changed for id, name, contact, address, status 3. Click the save button
8	Testing customer data search	1. Enter the customer name to search in the search field. 2. Click the enter button on the pc keyboard.
9	Testing delete customer data	1. Click the delete button 2. Click the Yes button
10	Testing added product data	1. Click the add data button 2. Enter the product catalog, description, picture. 3. Click the save button
11	Testing edit product data	1. Click the edit button 2. Edit attributes to be changed for name, address, contact no. Email, status. 3. Click the save button
12	Testing search product data	1. Enter the product catalog to search in the search field. 2. Click the enter button on the pc keyboard.
13	Testing delete product data	1. Click the delete button 2. Click the Yes button
14	Testing added service data	1. Click the add data button 2. Enter the service type. 3. Click the save button
15	Testing edit service data	1. Click the edit button 2. Edit the attributes to be changed for the service type. 3. Click the save button
16	Testing data search service	1. Enter the type of service to search in the search field. 2. Click the enter button on the pc keyboard.
17	Testing delete service data	1. Click the delete button

No	Description Testing	Procedure Testing
		2. Click the Yes button
18	esting added data questionnaire	1. Click the add data button 2. Enter categories, dimensions, questions 3. Click the save button
19	Testing edit data questionnaire	1. Click the edit button 2. Edit attributes to be changed for categories, dimensions, questions 3. Click the save button
20	Testing search data questionnaire	1. Enter the question to search in the search field. 2. Click the enter button on the pc keyboard.
21	Testing delete questionnaire data	1. Click the delete button 2. Click the Yes button
22	Testing search results of the questionnaire	1. Enter the question to search in the search field. 2. Click the enter button on the pc keyboard.
23	Testing reset the results of the questionnaire	1. Click the reset button 2. Click the Yes button
24	Testing added competitor data	1. Click the edit button 2. Edit attributes to be changed for the names of competitors, products, and services 3. Click the save button
25	Testing edit competitor data	1. Klik tombol edit 2. Edit atribut yang akan diubah untuk nama pesaing, produk, dan layanan 3. Klik tombol simpan
26	Testing competitor data search	1. Enter the name of the competitor to be searched in the search field. 2. Click the enter button on the pc keyboard.
27	Testing delete competitor data	1. Click the delete button 2. Click the Yes button
28	Testing edit data evaluation improvement	1. Click the edit button 2. Edit the attributes to be changed for evaluati 3. Click the save button

3. CLOSING

3.1. Conclusion

Based on the result of the test and discussion that has been made, it is concluded that the Service Information System for Service Improvement based on the Service Quality Assessment and Competitor Analysis in Wira Prima Pharmacy with Customer Relationship Management Implementation can help to recommend to the Director in service improvement based on the service quality assessment which is not in accordance with Customer expectations and assist the Director to keep customers from switching to competitors based on analysis on competitors.

3.2. Suggestion

Suggestions that can be given to the development of Service Improvement based on Service Quality Assessment and Competitor Analysis in Pharmacy Wira Prima with Customer Relationship Management Implementation that has been made for further development that can be developed by adding sms gateway feature to schedule notification of filling of quality service questionnaire.

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