Customer Relationship Management for Universiti Teknologi Malaysia (UTM): Housing Services

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Abstract - Customer Relationship Management (CRM) is one of the most popular business strategies that have been adopted among researchers, companies, institutions and organizations nowadays. CRM is responsible for organizational success in different sectors as it increases service efficiency and helps companies to sustain a good relationship with customers through increasing their satisfaction, retention and loyalty. Universiti Teknologi Malaysia (UTM) hostels are an ideal example of the organization that can take the full benefit of CRM as they face great challenge in providing housing services to students. This paper is set out to discuss how CRM could help UTM hostels management to obtain a clear view of their students and better satisfying their needs through development of a standard framework for implementing CRM in UTM hostels that can add more effectiveness to the entire process. The data for the study was drawn using qualitative approach which is carried out through conducting an interview with the top management staff of UTM hostels. The findings derived from the data analysis coupled with the theories obtained during the literature review assisted in formulating the proposed KCRM strategy framework for UTM hostels. The result shows that the proposed KCRM framework can indeed help UTM hostels management to improve the work efficiency by developing good student relationship and providing good quality services.

Keywords – customer relationship management; knowledge management; housing services

1. INTRODUCTION

Customers are fundamentally important in the chain of success in any company or institution irrespective of the services the organization provides. The task of searching for customers and then seeking to ensure their satisfaction and retention are also issues that concern most administrative staff in various sectors of work.

In a case study of UTM, students will be the core customers and their satisfaction will be the core business of UTM, CRM therefore will be a strategy that starts, maintains and optimizes relationships to maintain student's loyalty. There are different types of services provided by UTM to its students; this paper will focus on housing services. A common problem of students at UTM is obtaining hostel within UTM, and from the management perspective the problem is offering services that satisfy students’ needs and desires. The aim of this paper is to identify the overview of the existing UTM hostels services in CRM perspective, and from the other hand to investigate the most suitable CRM model that can lead to develop a strategy framework for implementing CRM in UTM hostels. This can be done by providing answers to the following questions.

- Are there any CRM elements in the current UTM hostels system?
- How can UTM hostels management create and sustain a better relationship with the students through CRM?

2. CUSTOMER AND CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customers are the prime focus in CRM and are crucial to the existence and success of every business or organization. Customers’ patronage of businesses and organizations are mostly responsible for their economic worth or reputation [1]. [2] Observes that, businesses exist because there is a customer to serve, and to achieve sustainable advantage organization should deliver high quality service that leads to satisfied customers. [3] Also realize that, businesses which can quickly understand and satisfy customers' needs, make greater profits than those which neglect to understand and satisfy them. Increased customer satisfaction level will result in greater customer retention rate which is a key determinant for customer loyalty, which could raise the expected profit as in Figure 1 [4]. Since the 90s when essentially the subject matter of customer satisfaction and customer retention, and their relationship with organization’s financial performance became a heated issue to managers, it is clear that customer behaviors like retention synonymous with profit margins as organizations that have retainable customers move closer to the inter-dependent variable – profitability [5]. On the other hand customer
loyalty is a behavior, built on positive experiences and values. This behavior is purchasing the products or using services, even if that does not seem to be probably the most rational decision. Additionally, customer satisfaction is essential in securing customer loyalty [6]. Loyal customers are willing to invest in a continuous relationship with the organization and also they go on record with buddies and relatives regarding their loyalty for an organization [7].

Different attempts have been made to arrive a concise definition of CRM by scholars but this paper will only attempt to present some of these definitions based on different opinions, with the hope that better understanding about the whole concept of CRM would be established. [8] Defined CRM as a business strategy which places the customer in the center of the organization’s processes, activities and culture. In connection with this, IT applications would essentially be the tools which permit organizations to employ that strategy. While, [9] argued that CRM can be seen as a company strategy of understanding and impacting on customer behavior through significant communication to be able to improve customer acquisition, customer retention, customer loyalty, and customer profitability.

[10] States that, fundamentally, CRM requires the interaction of technology and business processes accustomed to satisfy the requirements of a customer. [10] Continues by providing an explanation in IT field, in which CRM is understood to be a companywide integration of technologies and functions such as data warehouse, web sites, intranet/extranet, telephone support system, accounting, sales, marketing and production. Additionally, [11] opines that, CRM may also be understood to be an information industry term for methodologies, software, and in most cases internet abilities which help a company manage customer relationships in an organized way. In the same regard [12] considered CRM as utilizing the technology abilities to have interaction with customers in a significant dialogue, therefore the organizations can personalize its services to be able to attract and retain customers.

3. CRM COMPONENTS AND ITS OBJECTIVE

[13] has described CRM as the integration of essentially three components which are technology, people and business process. These variables work together to satisfy customers’ needs and desires. [13] Further emphasizes that the right combination of the three components is effective for successful implementation of CRM. For a successful CRM implementation, there should be changes in the business process to be customer oriented. At the same time, every business process that has direct or indirect influence to the interaction with customers should be analyzed and evaluated [7, 14, 15].

[16] mentioned that “knowledge is the sole of CRM” as CRM can contribute to make profits as well as create loyalty to organizations if it used effectively to transfer customer data into knowledge and then use this knowledge to build strong relationships with the customers. [17] Pointed out that main driving force behind most CRM implementations is not just acquiring strategic information, but rather making the business process more effective, as the main usage of CRM is to collect information, implying that each interaction with the customer should be logged. [18] Added that the properties of good working CRM extend to increase customer satisfaction as the organization can respond to the customers’ needs instantly by using of smart information technology CRM by flexible moving on information as it arrives to be able to accept and manage leads and meet unexpected demands. [19] States that effective implementation of CRM strategies increase customer loyalty as it will help to collect all important information about a customer and have all the relevant data about a customer’s history readily available at all access points in the organization.

[20] Summarizes the previous objectives and importance of CRM and further divided its benefits and importance into two categories which are, customer related objectives and business related objectives. The customer related objectives which are related closely to the customers involves increase customer satisfaction, customer retention and customer loyalty as these three objectives are inter-woven, implying that, when a customer is satisfied with the business that increases the retention chances and make the customer loyal. The business related objectives include collection and analysis of data to better understand customers, and by doing so better meeting their needs and providing forecasts about future sales in order to increase profits. Automation is another objective which goes hand in hand with efficiency and profits and it described very similarly.
4. CRM IMPLEMENTATION

CRM implementations have frequently demonstrated problematic, around fifty percent of customer relationship management projects were unsuccessful as a successful CRM project depends on several fundamental business roles and underlying organizational factors [21]. Among the fundamental and common causes of failure of CRM implementation is really the absence of customer strategy. [22] Defines strategy as the development of a valuable and distinctive position depending on a group of activities. [23] Claims that companies should address several critical strategies and comprehend the key interplay among them. These strategies are identifying the customer, choosing the most suitable channel to acquire the customer, getting the effects on the brand value, and identifying the most suitable CRM abilities. In fact, CRM aims to deliver value to both customers and stakeholders in order to achieve a mutually beneficial relationship but the strategy should be first followed by the value creation process. In addition, the organizations should create a culture to accommodate and accept change as the internal support considered fundamental prerequisite for successful CRM projects. The CRM strategy should be supported via an internal culture that lives in the company from top management to normal employees [24].

Implementing CRM strategies need to replace many processes in the organization and this replacement requires change. Naturally the people afraid of change and resists it, so the resistance must be handled in the early stages of CRM project [25]. In order to beat staffs resistance, a company should pay attention to education and communication programs as the employees should be participated and involved in performing the change [26]. [27] Has condensed the activities that concern the change and its effect on the business step-by-step into a useful acronym called ADCAR as explained in the following section:

- **Awareness**: Employees cannot comprehend or accept a general change in their company environment unless of course they are fully aware what it is.
- **Desire**: If the employees became aware of the change that is not adequate as they should have the desire to support the change.
- **Knowledge**: Following the employees’ awareness they have the need for change, they have to understand what their new task is.
- **Ability**: The management should train the employees and let them practice the work consistently because if they have just knowledge is not enough.
- **Reinforcement**: This aspect is vital which is about encouraging employees who are doing something right through reward them.

5. KCRM PROCESS MODEL

Knowledge oriented customer relationship management (KCRM) model was created by [12] being a chance within the hotel industry to attain good customer relationships and enhance the service quality by acquiring more customers and increase the level of customers' retention. [12] Argues that for effective implementation of CRM, there is a need for knowledge management (KM) process support. Based on that, the end critical factors for CRM implementation in the hotel sector have been analyzed and summarized to result KCRM model as in (Figure 2).

[12] Contended that hotels are a perfect illustration of an industry which may need CRM implementation. Hotels’ management should concentrate on applying CRM strategies that aim to find, gather and save correct information, validate and share it through the whole organization after which utilize it throughout all organizational levels for creating personalized, exceptional customer experience.
6. CASE STUDY METHODOLOGY

The Universiti Teknologi Malaysia, Skudai Campus is one of the sub-units of UTM that contribute in achieving the goals and mission of UTM towards its targeting vision. It provides 13 residential colleges that can accommodate up to 17,677 students in one academic session. These colleges are located at two residential areas namely the inner ring and the outer ring. The inner ring comprises of Kolej Rahman Putra (KRP), Kolej Tun Fatimah (KTF), Kolej Tun Razak (KTR), Kolej Tun Hussein Onn (KTHO), Kolej Tun Dr. Ismail (KTDI), Kolej Tuanku Canselor (KTC) and Kolej 11; whereas outer ring comprises of Kolej Perdana (KP), Kolej 9, Kolej 10, Kolej Datin Sri Endon (KDSI), Kolej Tun Ghafar Baba (KTGB) and Kolej Dato’ Onn Jaafar (KDOJ).

A. Vision and Mission of UTM Hostels

The mission of the UTM hostels management is to provide a suitable and conducive accommodation to the UTM students with respect to their expectations and values towards the UTM hostel management in a convenient means. The UTM hostels management also has vision of being competent among other units within UTM in contributing to the overall university vision.

B. Interview Interpretation

Based on the results from the respondents, it was revealed that the UTM hostels management has no CRM strategy for training their employees towards building a better relationship with the students. Furthermore, the study concludes that there is a lack of customer oriented culture in UTM hostel; therefore there is a need for the employees to be oriented towards the meaning of the change also the management must think strategically.

Secondly, based on the identification and evaluation of students, the UTM hostel management identifies and evaluates the students based on the information collected from them only with no special techniques or CRM strategy for doing this. For this reason the study recommends that, UTM hostel management should use CRM strategy in identifying and evaluating the students, identifying and evaluating the appropriate students’ information will help the UTM hostels management in the prioritization of offering services to the students in a more strategic way.

Thirdly, based on the students’ acquisition and differentiation between them, according to the respondents; UTM hostels management do not perform advertising and promotion campaigns and also they do not exploit the whole website capabilities for acquiring students as the UTM online hostel application system opens just for six days every semester. The study suggests that UTM hostel management should have CRM strategy that will help them to adopt the best strategies for
students’ acquisition. On the other hand, the differentiation is done based on the information collected from the students, but with no any techniques or CRM strategy for doing that which would have more effective using the CRM.

Fourthly, based on students’ enhancement, according to the respondents; UTM hostels management do not have student value enhancement strategy which can help them to think strategically by offering new and innovative services and focus on providing services better than their competitors. For this reason the study can recommend that UTM hostel management should use CRM strategy to help them in enhancing the students’ value and experience.

Fifthly, is based on students interaction and service customization after the interaction, according to the responders, the UTM hostel management interact with the students via some touch points such as the offices in the collages and the website of UTM hostels, these touch points as mention from the respondents are the only touch points they have with the students, but UTM hostel management should interact with the students in a strategic way using CRM strategy in which they can add more techniques to their web site for students convenience and satisfaction and also they can relies on this website as main touch point for their interactions. On the other hand, the customization is done by UTM hostels management through offering different classes of hostels and giving the students the option to make their own choice, it is a good point but if they use CRM strategy the customization will be more effective.

The last interpretation was based on the students’ retention, according to the responders UTM hostels management gets the feedback from the various offices of the colleges they have. This study suggests that UTM hostel management should have CRM strategy that will help in receiving the students’ complaints and propositions and deal with it in a more effective way to increase students’ retention rates and encourage them to be involved.

C. SWOT Analysis

SWOT analysis was used as a tool to analyze the strength, weakness, opportunities, and threats of the UTM hostels based on the results from the respondents. (Table 1) below shows the SWOT analysis that has been analyzed. According to SWOT analysis results, it is clear that there is a need to implement CRM strategies in UTM hostels to help them add more effectiveness to the overall hostels management process.

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weakness</th>
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<tbody>
<tr>
<td>Identify the students, evaluate them, give priority in offering services, differentiate between students, and customize the services to them; by collecting information on the students.</td>
<td>Do not have CRM strategy or any other strategy to identify, evaluate, prioritize services, differentiate, and customize in a strategic way.</td>
</tr>
<tr>
<td>Having a website in which basic information about hostels is provided and where the students can register online for accommodation.</td>
<td>Do not perform advertising and promotion campaigns and also they do not exploit the whole website capabilities for acquiring students.</td>
</tr>
<tr>
<td>Interact with the students in the offices in each college and using the website.</td>
<td>Do not have a CRM strategy in which they can add more effectiveness to the interaction.</td>
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<table>
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<tr>
<th>Opportunities</th>
<th>Threats</th>
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<tr>
<td>Can implement CRM strategy to help in managing the relationships with the students and doing work in a strategic way.</td>
<td>Lack of customer oriented culture; in which the employees should be oriented towards the meaning of the change and also the management should think strategically.</td>
</tr>
<tr>
<td>Can develop a web portal for UTM hostels that helps to better manage the work, the web portal can be better than the present one and be developed according to the elements of CRM model.</td>
<td>Lack of effective feedback process which makes the student feel not loyal to the UTM hostel.</td>
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<tr>
<td></td>
<td>Do not have student value enhancement strategy which can help them to think strategically by offering new and innovative services and focus on providing services better than their competitors.</td>
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7. FRAMEWORK DESIGN

The KCRM framework has been developed based on the theories and methodologies obtained during the literature review, coupled with the findings derived from the interview. This model has been enhanced to be more suitable to UTM hostels situation by adding one requirement at the beginning of the model; which is creating a culture to accommodate change in UTM hostels. After that this framework has been evaluated and validated from UTM hostels management point of view through conducting and interview with them. The KCRM Framework is depicted in Figure 3.
KCRM framework is based on collection, analysis and use of three types of students’ information which are:

- **Information of the student:** The student personal and transactional data which has to be collected by UTM hostels management to understand students’ needs and desires.
- **Information for the student:** The services and other information which are perceived useful by students such as place, price and promotion. This information has to be offered by UTM hostels management to meet each student expressed or implied needs.
- **Information by the student:** The students’ feedback, complaints, propositions and claims which have to be collected by UTM hostels management to evaluate the overall performance, provide better services and update it continuously.

KCRM framework argues that successful CRM implementation requires knowledge management (KM). To that end crucial factors for implementing CRM in UTM hostels are analyzed and summarized into two processes which are **customer relationship management process (CRM)** and **knowledge management process (KM)**, each process consist of several phases as explained in details in the following sections.

### A. Customer Relationship Management Process in KCRM Framework

The CRM process in KCRM framework divided into ten phases: (1) Creating a culture to accommodate change (2) Student identify, (3) Student evaluation, (4) Student prioritization, (5) Student acquisition, (6) differentiate, (7) Student enhancement, (8) interact, (9) customize, and (10) Student retention as shown in details in the following section.

**Phase 1 - Creating a Culture to Accommodate Change:** The first phase in the KCRM framework is creating a culture in UTM hostels that aims to initiate the need and create the awareness of CRM and the importance of the main principles and values of CRM; as there is no previously implemented CRM strategy in UTM hostels so the focus was on the pre-implementation phase in the development of KCRM framework.

The initiation to implement CRM strategy in UTM hostels need to be supported through a proper internal culture lives in the organization from top-level management to front-of-house staff as implementing CRM requires change to a new way in doing the work and normally employees resist the change because it brings more responsibilities and tasks, also sometimes there is a lack of understanding the change. Resistance needs to be addressed in the early stages of the project. To overcome employees’ resistance; education and communication courses need to be to be applied by UTM hostels management to help the employees to understand the need for change and increase the level of trust regarding the change. On the other hand, the employee should be participated and involved in supporting the change as people are likely to accept...
their own work. This can be done by UTM hostels management by giving exercises about the change and its impact on the organization according to the following steps:

- **Awareness:** UTM hostels management should create the awareness of the need to change to using CRM strategy, as the employees cannot understand or accept a change in their environment unless they know what it is.
- **Desire:** UTM hostels management should encourage the employees to have the desire for participating and supporting the change to use CRM strategy, as being aware of the change is not enough. Employees need to be committed to support the change.
- **Knowledge:** UTM hostels management should spread the knowledge among employees of how to change to use CRM strategy and what the change looks like, as after the employees being aware and they have the desire for change, they need to know what their new tasks are.
- **Ability:** The employees must have the ability and skills to implement CRM strategy, as they need practicing and training to do their work consistently well because if they have knowledge alone not enough.
- **Reinforcement:** UTM hostels management should apply the reinforcement strategy to keep the change in place, as the management should encourage the employees by catching those who doing something right and reward them.

**Phase 2- Student Identification:** In this phase, UTM hostels management should focus on collecting information about students from all the touch points they have with students such as; the offices in each college and UTM hostels website to identify who are their students and build a deep understanding of them. This is important for UTM hostels management to have a clear view of the students and what their needs and desires are, so the more information gathered on students, the more can be read into their habits and preferences [28].

**Phase 3- Student Evaluation:** In this phase UTM hostels management should evaluate the students depending on the information that have been collected in the Identification phase. This can be done through determining the importance of each student or students’ group in case of which student represents more value or brings more profit to UTM hostels. The importance of this phase is to enable UTM hostels management to deal with students according to their importance and value as the importance of students in UTM distinguish from one student to another as in the following.

- Some students can pay more for better services so they are more profitable than others.
- Some students like PhD students stay in the hostels for a long period compare with Master students, so they are more profitable and have more importance and value.
- The local students represent more importance and value than international students as it is compulsory for them to live inside UTM, so they are more loyal than international and bring more profits.
- The students represent more importance and value than people from outside of UTM as sometimes and during holidays UTM hostels management offer housing services to people from outside of UTM.

**Phase 4- Student Prioritization:** After UTM hostels management collect the students’ information in the Identify phase and evaluate this information in the Evaluation phase, they are ready for determining the prioritization in offering services for students, as the services should be offered in such as way satisfying students who have more importance and value must be done initially. For example, UTM hostels management offer housing services to people from outside of UTM during holidays as the hostels became empty, but during the studying days the hostels must be exclusively for students because they tend to be more importance and more valuable. And the same can be done for the other examples mentioned in the previous phase.

**Phase 5- Student Acquisition:** In this phase UTM hostels management should identify channels or strategies for acquiring students in order to build a comprehensive relationship with students through these channels [20]. They should explore new and innovative methods to attract as many students as possible and at less cost using CRM. One of the best strategies to acquire new students is performing advertising campaigns, promotions and pricing programs.

**Phase 6- Differentiate:** This phase means that different students should receive a different level of service according to their needs [29]. UTM hostels management will be in the right position to differentiate between students after doing the whole previous phases. The differentiation should be done according to the following.

- The courses that students are taking: (BSc, MSc, or PhD) to determine the duration that the students can stay in the campus.
- The gender or marital status: To divide the students into groups such as men, women and families.
- The nationality of the students: To determine if they are local or international.
- The student financial status: As some students can pay more for better services.

**Phase 7- Student Enhancement:** In this phase UTM hostels management should enhance the students’ value by offering new and innovative services or enhancing the existing services continuously for creating personalized, unique
students’ experiences and increase their satisfaction and loyalty. This can be done by providing new services for more students’ convenience such as high speed internet, air-conditioning services and other services according to the students need and the UTM hostels management capability to provide this kind of services. Similarly, UTM hostels management should analyze the competitors’ situation to provide services better than them and increase students’ loyalty towards UTM housing services.

**Phase 8- Interact:** In this phase UTM hostels management should interact with the students in relationship building efforts through a variety of communication tools and technologies such as the offices in each college or other technology means like website, emails and social networks [29]. The interaction with students through the touch points helps UTM hostels management to present their services to students and increase the percentage of selecting these services. From the student side, it increases their expectations regarding the available service received and helps them to choose services which are suitable to their needs.

**Phase 9- Customize:** This phase refers to the customization which should carry out by UTM hostels management in order to ensure that the expectations of students are met, it requires that the management adapts its services in such as way have something unique for each students’ group according to their needs, desires and value [29]. This is done by giving the students the option to make their own choose by offering different classes of hostels for example.

- Hostels for male, female and families.
- Hostels with extra special services to those who can pay more or have more value than others.
- Hostels in different areas in UTM campus so the students can choose the one which is near to their faculties.

**Phase 10- Student Retention:** In this phase it means after the students register for the hostels and experience its services UTM hostels management should analyze the probability of keeping students and encourage them to be involved by handling the students’ feedback, complaints, propositions and claims carefully [20]. Furthermore, the output of this phase can be used as input for the previous stages to enhance the workflow and ensure the sobriety and flexibility in performance.

### B. Knowledge Management Process in KCRM Framework

KCRM framework argues that successful customer relationship management (CRM) implementation requires knowledge management (KM) process as it is not enough that UTM hostels management know quite a lot about the behavior of their students but they should make good use of this knowledge. The information should not be confused with knowledge. Knowledge is produced when information is analyzed and used to enable and leverage strategic actions. KM process in this framework is activities directed towards creating and leveraging intelligence that UTM hostels management needs to build and maintain students’ relationships, as the information related to each phase of the CRM process in KCRM framework must be analyzed and processed to produce knowledge through the KM process with its three micro phases (1) data collection, (2) information generation, and (3) knowledge dissemination as explained in details in the following sections.

**Phase 1- Data Collection:** In this phase UTM hostels management should focus on leveraging all the necessary activities to capture information about students as the information related to each phase of the CRM process in KCRM framework should be used gradually as inputs.

**Phase 2- Information Generation:** In this phase UTM hostels management should attempts to convert data that has been amassed through the Data Collection phase into actionable information. This involves employing traditional analysis techniques, as well as data mining and modeling methods.

**Phase 3- Knowledge Dissemination:** In this phase UTM hostels management should disseminate any knowledge that is generated to all members of UTM hostels who have direct contact with the students. In other words, the different knowledge generated through the KM process in KCRM framework should be an input for each phase of the CRM process in KCRM framework.

### 8. CONCLUSION

This paper starts by giving a brief discussion about the customer in terms of definition, customer satisfaction, customer retention and customer loyalty. Then, the paper investigates CRM generally about, definition, components, objectives, importance, and implementation. The paper also discussed the qualitative approach which was used to collect the necessary data for the study, and SWOT analysis technique which has been used to analyze the collected data. Finally, a proposal for the integrating of KM into CRM strategies was highlighted by presenting the new KCRM framework as the major issues for successful CRM and KM implementation in UTM hostels were clearly identified. Overall KCRM framework in UTM hostels requires a hostel culture whereby every student interaction is perceived as a learning experience.
and each student contact as a knowledge-building opportunity and a chance to collect new information about students. The proposed KCRM framework can even be fitted to other units in UTM or other companies to solve their problems.

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