

Original Article

# Social CRM Framework for University

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**Abstract** - The development of the use of social media in Indonesia is very fast. Universities need to establish good relations with stakeholders. Social CRM can be used as a tool to build good relations with stakeholders. The objectives of this study are: (1) Building a social CRM framework for universities and (2) Knowing the popularity of social media in universities in Central Java, Indonesia. The successful implementation of social CRM in universities will be very helpful in increasing effectiveness and efficiency in establishing good relations with stakeholders. The research was conducted using a synthesis method from various relevant kinds of literature to build a customer relationship management framework for universities. This study also uses an observation method to know the popularity of various social media in universities. Universities CRM framework designed includes social media, social web, CRM system. The CRM system consists of operational CRM, analytical CRM, and database. The order of social media usage from the most used is Facebook, followed by Instagram, Twitter, WhatsApp, YouTube.

**Keywords** - CRM, Social CRM Framework, University.

## I. INTRODUCTION

Technological advances, the social media revolution, and their impact on consumer behavior have revolutionized CRM [1][2]. Customers can control and drive conversations about the brand, and in doing so, customers can influence brand image and relationships [3], which in turn will determine how companies should personalize their experiences and develop customer relationships [4]. New customers expect personalized service on any device, anywhere and anytime [5], and they strongly "promote" the brand when they are satisfied [6]. Technology also enables companies to collect, analyze, and exploit market intelligence more quickly and efficiently to learn about customers better and make interactions with customers more personal. [7].

Companies need to change traditional CRM, which focuses on managing customer transactions through the customer life cycle, into social CRM, which aims to make customer experiences and interactions personal [8]. However, based on the CRM theory of conceptualization and evolution that has been initiated, the literature fails to

provide a framework and examples in the use of social media to implement social CRM that meets the needs of new customers [9]. As long as the ways to exploit social CRM tools are not studied and determined [9][7], companies will have problems implementing social CRM successfully [4].

Graduates looking for information about universities, R. Whiteside and GS Mentz, should find information about studies, accreditations, rankings and achievements, accommodation facilities, study fees, and locations on the website structure [10]. Kittle and Ciba present the characteristics most emphasized by higher education institutions, which are considered as important factors for prospective students in choosing a particular educational institution: the programs offered by the university, quality, location, and added value [11].

Suhari et al., in their research, found that: (1). There are 26 kinds of CRM features used on the mobile university website. The most commonly used features are Website customization, and the second-ranking feature is the Telephone facility. On the other hand, the third rank features are About company / Company profile on Location. (2). Universities in Central Java have implemented more than 50 percent of CRM features as much as 30% [12]. Macwan and Khanna produced a detailed study report on various types of data mining applications in the healthcare sector and to minimize the difficulty of healthcare data transactions. A relative study of different data mining applications, different techniques, and methods applied for knowledge takeout from databases produced in the healthcare industry [13].

Based on the 2021 Hootsuite Survey, internet users in the world have reached 4.66 billion people. Of this number, 4.22 billion are social media users. Considering that almost all internet users are social media users, universities need to establish good relationships with users. Companies have begun to increase their investment in social CRM technology [6] but do not know how to use it effectively [9], and the literature fails to provide a framework, as an example is the use of social media to implement Social CRM that meets the needs of new customers [9]. Thus, it is necessary to develop a CRM framework for universities. The objectives of this study are: (1) Building a social CRM



framework in universities and (2) Knowing the popularity of social media in universities in Central Java, Indonesia. The success of the implementation of social CRM in universities will greatly assist in increasing effectiveness and efficiency in establishing good relations with stakeholders.

## II. LITERATURE REVIEW

Social CRM is an integration of activities carried out by customers traditionally (including processes, systems, and technology) with Social Media applications (which involve customers in collaborative conversations) [14]. With social media and content created for users, CRM vendors are trying to integrate data outside the company into CRM, which is called social CRM [15]. This becomes a challenge because the form of data is unstructured and abundant. Integrating unstructured data into a highly structured enterprise database is not an easy task, and it is one of the challenges of big data.

Recently, several researchers [16][17] have explored the role of social media in CRM through various perspectives of the CRM process. There are various perspectives of the CRM process [18], for example, the CRM process at the customer interaction level [19], the cross-functional CRM process [20], and the CRM process at the macro level [21]. The CRM process at the customer interaction level promises how to initiate customer relationships, maintain, and terminate relationships. At this level, it is managed through customer contact points [19]. Some studies even integrate traditional CRM with the level of customer relationship through social media. The findings in this study suggest that for further research to link social media and CRM that focuses on a cross-functional CRM perspective. The perspective of cross-functional CRM includes the CRM process. Process CRM supports the needs of strategic planning, information management, customer value, and performance measurement processes. There are three types of process CRM, namely operational CRM, analytical CRM, and strategic CRM. So that the cross-functional CRM process perspective does not only explain the activities in each process but also how each process interacts with other processes. The purpose of the macro-CRM process is to generate consumer demand and facilitate the channel for orders and the tracking facility of these orders.

The results of research conducted by EDUCAUSE in July 2014 reported that Lang and Judith in defining CRM systems as business processes, software, and strategies for managing and increasing interactions between institutions and consumers, for example, prospective students/students, alumni, staff, and faculty [22]. Lang and Judith also stated that the CRM system in universities is changing rapidly. CRM should be used throughout the student cycle (from prospective students to students to graduate college). CRM can also be used to support institutional interactions with prospective students, which will increase the likelihood of students registering as prospective students. Surveys conducted by EDUCAUSE include:

- Use of CRM by departments within the institution (e.g., admissions, recruiting, campus life, etc.)
- Integrating CRM and Student Information Systems (SIS)
- Measures of institutional success in using CRM
- Barriers to maximizing CRM usage
- Impact of CRM implementation
  - Size of efficiency change
  - Size of change complexity
  - Size of staffing change
- Use of CRM communication methods (example: email, text, chat, etc.)
- Share CRM data with SIS and use data for institutional planning

CRM can be classified into several types [23]:

### A. Operational CRM

Operational CRM focuses on the automation of customer-facing processes such as selling (Account management, Lead management, Opportunity management, Pipeline management, Contact management, Quotation and proposal generation, Product configuration), marketing (Market segmentation, Campaign management, Event-based (trigger) marketing) and customer service (Case (incident or issue) management, Inbound communications management, Queuing and routing Service level management).

### B. Analytical CRM

The focus of Analytical CRM is on data mining which can later be directed for strategic or tactical purposes. Operational activities such as capturing data, storing, extracting, integrating, processing, interpreting, distributing, using, and reporting customer-related data are forms of analytic CRM activities. The output of analytical CRM provides added value for both the company and the customer.

### C. Collaborative CRM

Collaborative CRM applies technology across organizational boundaries with a view to optimizing company, partner, and customer value

### D. Strategic CRM

Strategic CRM is a core customer-centric business strategy that aims at winning and keeping profitable customers. CRM strategy is a high-level plan of action that aligns people, processes, and technology to achieve customer-related goals

## III. RESEARCH METHOD

The research was conducted using a synthesis method from various relevant kinds of literature to design the university's customer relationship management framework. This study also uses an observation method to determine the popularity of various social media in universities. The research was conducted through the stages, as shown in Fig. 1 below.

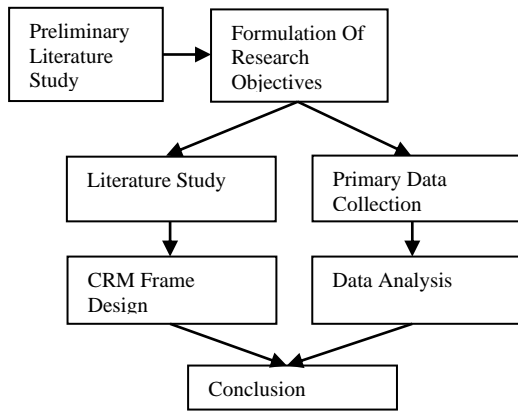


Fig. 1 Research stages

The population of this study is the website of the University in Central Java. The number of existing universities is 69 (source of the Higher Education Database of the Ministry of Research, Technology and Higher Education in 2121). Due to the small number of universities, the entire population is used as the object of research. The source of data used in this study is primary data. Primary data sources are data obtained directly on the object of research. Researchers recorded social media on the university's website.

**IV. RESULTS AND DISCUSSION**

**A. Social CRM Framework**

Mosadegh and Behboudi developed a social CRM framework, as shown in Fig. 2.

**a) Operational CRM**

Operational CRM is defined based on this new paradigm as below:

- 1) Social Marketing
- 2) Social Selling
- 3) Customer service

**b) Collaborative CRM**

Collaborative CRM using multiple channels and ways customers communicate with the company such as E-mail, fax, website, call center, and so on.

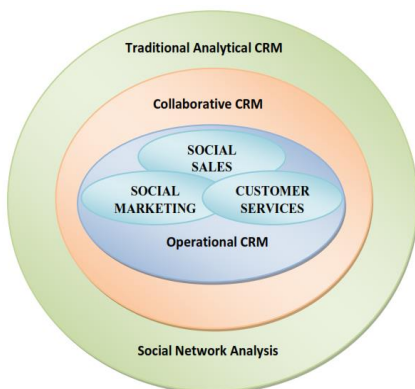


Fig. 2 Social CRM Framework[24]

**c) Traditional Analytical CRM**

Including traditional analytical CRM is Data Mart, Data Warehouse, Customer database, and other customer information systems. This data and information are

analyzed by different algorithms and techniques like data mining and other methods to generate which information and knowledge can be used to have deep insights about customers and therefore create smart strategies about customers.

**d) Social Network Analysis**

This is a breakdown of who is in decision-making positions and who is influential, and how they interact. Seeing the interaction between social groups and individuals is sometimes less obvious who is the influencer, but maybe the influencer is the key to reaching an agreement.

Anshari and Almunawar proposed a Model of Social CRM in Health services. This framework was developed from Enterprise Social Networks, Internal Social Networks, Listener Interfaces, Social CRM systems in healthcare providers, and healthcare value configurations (value chains and value stores) [25].

Reinhold and Alt proposed an integrated CRM framework. A key element for such an integrated Social CRM (SCRM) system is the capability to monitor and extract knowledge from the Social Web and turn it into data and information that can be used for CRM processes. CRM that has the capability to extract knowledge from the social web is an analytical Social CRM. Needs analysis includes the ability to generate information from the heterogeneous Social Web. To transform into information is done by using knowledge aggregation, transformation, and analysis. Through data mining and text mining techniques, content can be converted into information and linked to existing CRM data. CRM system users can immediately work with this additional knowledge and start CRM activities [26].

Based on some of the social CRM frameworks above, the university's CRM framework is proposed as follows Fig. 3 below:

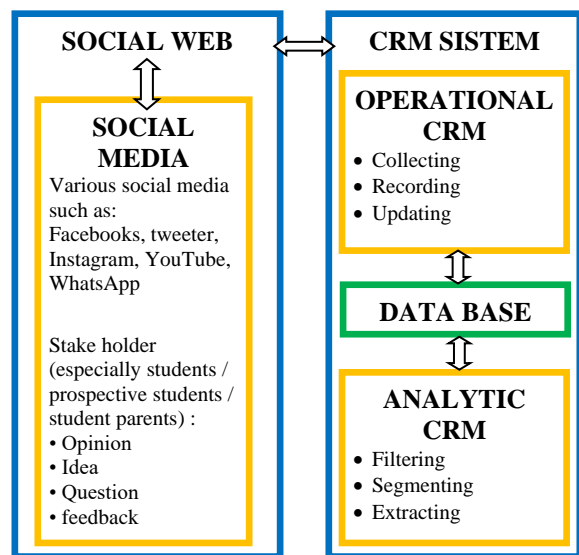


Fig. 3 University CRM framework

### B. Usage of Social-Media at the University

The number of universities in Central Java is 69 (source of the Higher Education Database of the Ministry of Research, Technology and Higher Education in 2021). The social media used for the purposes of this research refers to the social media reported on the results of the Data Report in collaboration with Hootsuite, and We Are Social: Report July 2021.

Based on the results of a review of 69 university websites in Central Java, Indonesia, the following results were obtained:

**Table 1. Percentage of universities that use social media**

No.	Social Media	Number of Universities Social Media Users
1	Facebook	84%
2	Instagram	71%
3	Twitter	61%
4	WhatsApp	58%
5	YouTube	51%
6	LinkedIn	7%
7	Telegram	6%
8	Pinterest	6%
9	Fb Messenger	1%
10	Snapchat	0%

The most popular social media is Facebook, the number of universities that use as much as 84%. The second rank of social media is Instagram (that is, 71% of universities use it). The third rank is Twitter, with the percentage of universities that use 61%. The fourth rank is WhatsApp, with the percentage of universities that use 58%. YouTube ranks fifth with 51% of users. Ranking below it in a row are LinkedIn, Telegram, Pinterest, Fb Messenger, Snapchat. The number of universities that have not used social media is 5.8%.

### V. CONCLUSION

The social CRM framework contains two main components, namely System CRM and Web CRM. Web CRM contains Social-Media. The component of the CRM system consists of operational CRM, analytical CRM, and databases. The Social Web interacts with the CRM system.

The results of research on the use of social media at universities in Central Java showed that five of the most popular social media were Facebook, followed by Instagram, Twitter, WhatsApp, YouTube. Not all universities use social media. The number of universities that have not used social media is 5.8%.

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