

## Social CRM Features Identification for Higher Education

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**Abstract:** Higher Education (HE) institution as a social business entity is necessary to keep update to the business practices. It is necessary to drive the involvement of their customer in their business chain activities via. social media, hereinafter referred to as Social CRM (S-CRM). The value chain of a HE business processes consist of education, research and community services (HEVC). Those HEVC is derived based APQC cross industry process classification framework. The social CRM itself is a business process of HEVC in which involving a face-to-face to its customer (student and graduates). This study describes the identified social CRM features that are intended to work to support those business processes. Those software features groups into operational, collaboration and analytical social CRM. The operational CRM itself consist of marketing automation, sales-force automation and service automation.

**Key words:** Higher education, business process model, social-CRM, software features, classification framework, business processes

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### INTRODUCTION

Companies need to work harder in order to get more customers. Therefore, companies implement various methods to be able to continue their business with the concept that focus on their customers. The concept of in which customer is the center of concern is known as Customer Relationship Management (CRM). Using CRM strategies a company will be able to survive and success in the business competition as CRM strategies aim to acquire new customers, retain existing customers, develop value proposition and improve customer experience. CRM in use today is often referred as traditional CRM or called CRM 1.0 (Greenberg, 2010). CRM 1.0 enables efficiency in business operations, especially in marketing, sales and customer service.

The explosion of social media which includes social networks, blogs, wikis, etc. has totally changed the business way and concept. The power of social media is increasing with the rapid advancement of mobile technology that enables all mobile communication equipment adopting the social media. By using a ordinary mobile phone users are able to access all social media sites. In addition to mobile technology, something that makes social media so phenomenal is the users who use it. One of the largest generations today is Generation Y (Gen Y), people who were born between 1977 and 1994. This generation is also said to be a generation that has very high number of technology-savvy people compared

to the previous generation (Greenberg, 2009). The change of CRM 1.0 into CRM 2.0 (Social CRM) greatly impacted higher education because higher education is a service company that has unique characteristics compared to other service companies such as hotels, hospitals, transportation, etc. For example, the customer in educational institution has a longer time commitment with the service provider in getting customer experience. Customers at universities are students and graduates while the prospect customers are prospective students. In addition, customers of the universities (students and graduates) are also the products produced by the universities. It makes the customer expectations are doubled (double expectation). The uniqueness of the customer's characteristic in university level has a significant impact if the customer is not satisfied with the services provided by the universities.

Because of this, universities are competing to get customer and looking for ways to attract prospective students to join their institution. Universities also focus on how to maintain the customer so they do not move to other universities. In the last 3 years, there still limited researches related to social CRM study, especially for higher education. Generally, the previous research and the existing literature still focus on the development of social CRM framework in general (Greenberg, 2010; Mosadegh and Behboudi, 2011; Malthouse *et al.*, 2013), several frameworks that have been made recently tested for specific industries such as telecommunications

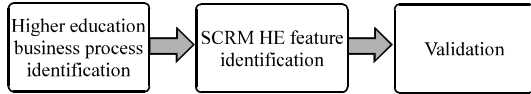


Fig 1: Research process flow

(Wu *et al.*, 2009), health (Almunawar and Anshari, 2011) pharmacy (Chatterjee, 2012), hospitality and it was recommended to implement the social CRM framework on other industries, including the higher education.

**MATERIALS AND METHODS**

APQC is one of the most widely used process framework in the world. This framework creates a common language for organizations to communicate and define work processes comprehensively and without redundancies. Many organizations in the world use this framework as a benchmark, content management and performance assessment. The common process can be studied from APQC cross industry process classification framework Version 7.0.2-2016 and for education organization process is APQC education process classification framework Version 7.0.4-2016. However, the category of the education version includes only the classification process for primary and secondary education. Meanwhile, higher education has three function including education, research and community service. Education category in APQC is only suitable for education related process. Therefore, this study uses a base APQC cross industry process classification framework Version 7.0.2-2016.

This study used a qualitative approach to identify the features for social CRM applications in higher education. Qualitative research is a scientific research that shows the investigation about finding the answer to a question, use a procedure that has been defined previously to answer questions systematically, gather evidence, produced findings that have not been determined in advance and generate new findings outside the scope of current research studies (Denzin and Lincoln, 2005). Figure 1 shows the phase of the study.

The first step is to identify the overall business process of the Higher Education as a reference in determining the needs of social CRM features. Furthermore, among all the business processes only the business processes that directly related to customers are considered. Value chain is the basis for the identification of business processes while the details of the business processes in each chain are set based on the suitability of the business processes contained in APQC cross industry process classification framework Version

7.0.2-2016. The next step is to identify features of Social CRM based on the selected business processes identified in the first step and based on the literature related to features in CRM. The last step is to validate the features that have been identified. Validation was conducted by Focus Group Discussion (FGD) with a domain expert from eight reputable private universities in Indonesia and 2 social CRM application vendors.

**RESULTS AND DISCUSSION**

**Process business identification in higher education:** The approach taken to identify the business processes of social CRM in higher education refers to studies conducted by Meyliana and Budiarjo (2014). The study uses a Porter’s value chain model and APQC process classification framework<sup>SM</sup> in order to determine the main processes in higher education from end to end. The mapping results the value chain in the universities called the Higher Education Value Chain (HEVC). The mapping can be seen in Table 1. Based on the mapping in Table 1, the authors described the higher education value chain model as shown in Fig. 2.

The customers of higher education institutions are students and graduates while prospective customers are the prospective students of the institutions. Therefore, the CRM business processes are based on the student life cycle which is heavily focused on teaching and learning process. Therefore, based on Table 2, we selected the CRM processes that only relates to teaching and learning process. This is because the other processes, research and the community service process, focus on lecturer. The process of teaching and learning that relates directly with the customers (Fig. 3) consists of a series of processes starting from the marketing and admission which then continued to the process undertaken in parallel between the student orientation and academic operations with the process of co-curricular activities, then proceed with the graduation, alumni relations and retention and teaching and learning evaluation. In the academic operations there are repeated sub-processes, starting from the process of enrollment, teaching and practicum, student access learning resources, examination, scoring, evaluation and advisory. Student life cycle is a cycle of student presence at a universities starting from prospective student to student and later became graduates. The lifecycle is illustrated in Fig. 4. Student lifecycle is published by Nair *et al.* (2007) which explains that:

- Targeted/suspect individual who is perceived to have potential to study at higher education

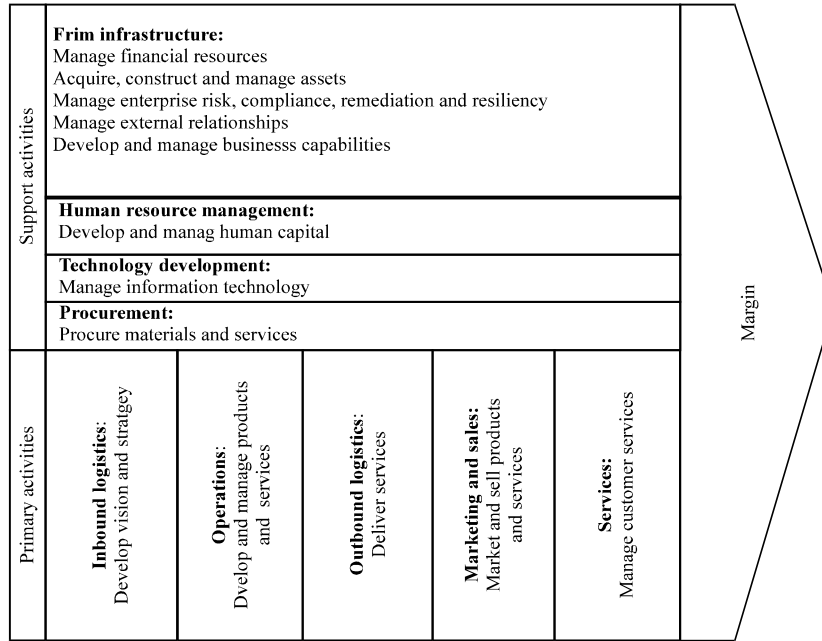


Fig. 2: Higher education value chain model

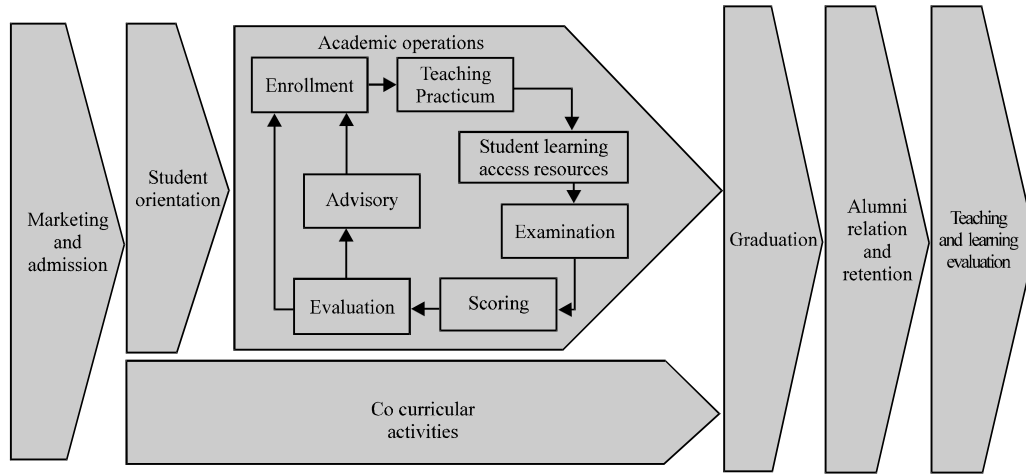


Fig. 3: Processes in teaching and learning that directly relates to the customer higher education value chain model



Fig. 4: Student life cycle

- Prospect the individual will be a prospect when there is a collection of information and opinion formation in this phase
- Applicant the individual become applicants when they make the decision to join the higher education
- Admitted: the individual is admitted when the university made the decision to accept students
- Enrollee this is the stage where the students become part of the higher education
- Alumni at this stage, the students that are satisfied with their academic experience will develop long term loyalty to the university (his almatamter)

**Table 1: Mapping between porter’s value Chain, APQC process classification framework and HEVC**

Porter’s value chain	APQC process classification framework	Higher education value chain
<b>Primary activities</b>		
Inbound logistic	Develop vision and strategy	Corporate and operational plan Council Academic development Resource and content management Research plan Research preparation Community services plan Community services preparation Learning needs diagnosis Acquiring learning solutions
Operations	Develop and manage products and services	Student orientation Academic operation Co-curricular activities Research implementation Community services implementation Deliver and deployment Library service management Dormitory management Transportation management Graduation
Outbound logistics	Deliver services	Alumni relation and retention Research outcome Community services outcome Deliver and deployment Marketing and admission Student service management Administration management
Marketing and sales Services	Market and sell products and services Manage customer service	
Support activities		
Firm infrastructure	Manage financial resources  Acquire, construct and manage assets Manage enterprise risk, compliance, remediation and resiliency  Manage external relationship  Develop and manage business capabilities	Financial management Budget management Building and infrastructure management Compliance report obligations Audit compliance Legal compliance Partnership management Corporate communication management Performance management Change management Teaching learning evaluation Research review Community services review Learning impact measurement Quality management
Human resource management	Develop and manage human capital	Human resource management
Technology	Manage information technology	Information technology management
Procurement	Procure materials and services	Procurement management

**Table 2: CRM process mapping to higher education value chain**

Customers	CRM process	Higher education value chain process
Prospective students	Acquire	-
Students	Retain	Student orientation Academic operations Co-curricular activities Graduation Teaching and learning evaluation
Alumni	Develop	Alumni relations and retentions Teaching and learning evaluation

CRM business processes consist of three processes, including acquire, retain and develop process. CRM business processes are then mapped to the student life cycle as seen in Fig. 5.

Figure 5 shows that the acquire process is for prospective students, retain process is for students and develop process is for alumni between CRM processes with the processes at the higher education value Chain model can be seen in Table 2.

**Social CRM features identification for higher education:**

The identification process of features of Social CRM in Higher Education is conducted by mapping the needs of organizations that obtained from business processes against a common feature on Social CRM. Therefore, before identifying the features of social CRM in HE, it is necessary to identify the general features of Social CRM based on CRM 1.0 general features and characteristics of social CRM.

The 3 types of applications of CRM 1.0 which are operational CRM, collaborative and analytical CRM (Buttle, 2009). For operational CRM, there are three sub-applications which are marketing automation, sales-force automation and service automation. Sales-force automation is the application of technology that helps the sales process (Buttle, 2009). Therefore, sales-force automation is identical to the process of the

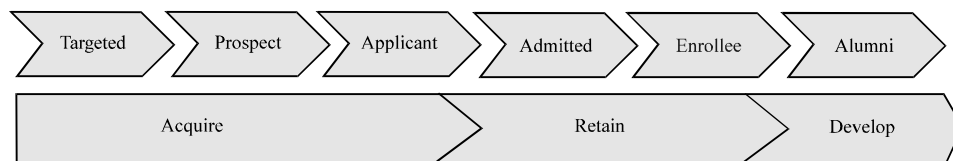


Fig. 5: Mapping of CRM business process to student life cycle

sale transaction between the seller and the buyer. In the context of higher education, this transaction is in the process of registration of a prospective student to university. Marketing automation is the application of technology to support the marketing process (Buttle, 2009). Marketing is the action of promotion and sale of the product or service including marketing research and advertising processes (Buttle, 2009). In the context of higher education, marketing process also involve the prospective students as in the sales process. Service automation is the application of technology to help service staff and management in carrying out its functions (Buttle, 2009). In the context of higher education, service automation involves students and alumni as the customer.

The basic features of social CRM are the same as features in CRM 1.0 which is comprised of operational CRM (marketing, sales-force and service automation), collaborative and analytical CRM. Then it needs to be identified additional features that support the implementation of social CRM. One of the characteristic of social CRM is being integrated with social media which is one form of communication channel between the company and the customer (Greenberg, 2010). To meet this need, it is required a feature to manage channels in the social CRM. Therefore, channel management is identified as feature for social CRM. Channel management is part of the marketing automation and collaborative CRM. Besides that there are some characteristics of the social CRM features. Each features need to be designed to meet the characteristics social CRM (Greenberg, 2010).

Based on the results of the analysis, the application of social CRM must support operational CRM (marketing, sales-force and service automation), collaborative and analytical CRM while meeting the criteria of social CRM (Greenberg, 2010) and channel management is included in marketing automation and collaborative CRM. Table 3 show outlines the features that are able to support the business needs of university-related CRM.

Table 3 shows the features of social CRM that are capable of supporting the needs of CRM process in higher education. Identification of features at that stage

still in high-level. The next process is the identification of features in more detail based on the common features of CRM based on Buttle (2009). The features were selected and modified according to the needs of the universities. These features can be seen in Table 4-6.

**Validation of higher education social CRM features:**

After identifying the features required in the application of social CRM for higher education, the next step is to perform validation on these features. Validation is conducted using Focus Group Discussion (FGD). The participants consisted of representatives from 8 reputable private universities in Indonesia as well as the two vendors social CRM systems, namely Microsoft and oracle. The criteria to determine the private universities invited in the FGD are based on how they practice Social CRM which includes:

- University’s website have social media accounts that are embedded on the official website of the university
- University’s website has features that are oriented to the customer
- University’s website shows adequate IT skills (there are applications that are embedded like e-Learning, academic information systems, etc.)
- The organizational structure of university has units that are oriented to the customer for example: admissions unit, student services unit, alumni management unit, career development unit, etc.

Based on the results of the FGD, the majority of FGD participants stated that they understand and agree that the application features of social CRM that has been identified could help universities to manage their customers better. Some FGD participants recommended some revisions such as adjustments of features names in accordance with the context of university; integration between CRM visions of university with implementation of CRM applications and need to map between division or actors and each feature. Thus based on the results of the FGD, social CRM features that have been identified in this study are appropriate to be implemented at universities.

**Table 3: Higher education social CRM identification**

CRM process in HE	Requirement analysis	Supporting SCRM
Marketing and admission	Promotion process for prospective students Student admission process Market analysis Collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni	Operational CRM-marketing automation Operational CRM-sales force automation Collaborative CRM Analytical CRM
Student orientation	Easiness of information delivery, complaint handling and other customer service process for students and alumni collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni	Operational CRM-service automation collaborative CRM
Academic operations	Easiness of information delivery, complaint handling and other customer service process for students and alumni Collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni	Operational CRM-service automation collaborative CRM
Co-curricular activities	Easiness of information delivery, complaint handling and other customer service process for students and alumni collaboration between elements in Higher Education channel management to facilitate communication between universities and students and alumni	Operational CRM-service automation collaborative CRM
Graduation	Easiness of information delivery, complaint handling and other customer service process for students and alumni collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni	Operational CRM-service automation collaborative CRM Analytical CRM
Alumni relation and retention	Easiness of information delivery, complaint handling and other customer service process for students and alumni collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni Alumni data analysis	Operational CRM-service automation analytical CRM collaborative CRM
Teaching and learning evaluation	Easiness of information delivery, complaint handling and other customer service process for students and alumni collaboration between elements in Higher Education Channel management to facilitate communication between universities and students and alumni teaching and learning data analysis	Operational CRM-service automation analytical CRM collaborative CRM

**Table 4: The identified higher education social CRM features for operational CRM**

General features of operational CRM	Features identification
Marketing automation	Student and alumni management, campaign management, market segmentation, document management, email campaign management, enterprise marketing management, event management, search-engine optimization, lead generation, loyalty management, marketing analysis, partner management, product management, telemarketing, customer lifetime value, product pricing, brand awareness, content management
Sales-force automation	Account management, activity management, contact management contract management, incentive management, lead management, opportunity management, pipeline management, sales forecasting, territory management, cross-selling and up-selling, value proposition, e-Commerce management
Service automation	Agent management, case management, customer self-service, response management, escalation, inbound communication management, outbound communication management, invoicing, queuing and routing, scheduling, service analysis, service level management, complaint management, feedback management, customer satisfaction management, knowledge management, change management, help-desk management, queries management

**Table 5: The identified higher education social CRM features for collaborative CRM**

General features of collaborative CRM	Features identification
Collaborative CRM	Channel management, prospect student identification, prospect student attraction, student retention, student development, program development, market research, customer interaction center

**Table 6: The identified higher education social CRM features for analytical CRM**

General features of analytical CRM	Features identification
Analytical CRM	Student and alumni data management (capture, store, extract, integrate, process, interpret, distribute, using, reporting), data mining, Online analytical Processing (OLAP), data warehouse

## CONCLUSION

From the analysis we found a number of features that are required on the application of social CRM in higher education. It was found that many features on operational, collaborative and analytical CRM as described by Buttle (2009) are also required by the Social CRM in university. There are some features that are not part of the social CRM in Higher Education because they are not directly related to Higher Education business process. Moreover, Channel Management became one of the important features for managing the communication channel between higher education, students and graduates. The communication channel can vary, including social media, social network and other type of application. This study is a process of identifying software features based on business process analysis and literature study from a number of social CRM and CRM related research. The results of this study are expected to be the basis for the development of more specific features for social CRM application in higher education.

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