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Feature Analysis of the "Customer Relationship Management" Systems for Higher Education Institutions

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Abstract
Universities, business schools and other higher education institutions all over the world are experiencing deep changes in the way they work and interrelate with their 'clients', i.e. students and their relatives, alumni and donors, faculty and staff members, because these constituents are demanding more attention through different channels as well as immediate response and service. Technology - materialized in the form of Customer Relationship Management (CRM) systems - is the great promise for solving these demands.
This article summarizes the features a CRM system should possess to make educational institutions thrive in the current digital era, and points out the future trends on this topic. The final objective is neither an analysis of the applications available on the market nor a selection guide, but a recommendation for the end users to utilize a CRM system when considering achieving some of the business needs implied in the features available on these CRMs.

Keywords

CRM, education, higher education institution, alumni, student lifecycle management

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1. Introduction

As (Parvatiyar and Sheth, 2002) summarize in their article, Customer Relationship Management (CRM) is as a comprehensive strategy and the process of gaining, retaining, and partnering with segmented customers to generate superior value for the organization and the customer. It involves the integration of marketing, sales, and customer service functions of the organization to achieve greater efficiency and effectiveness in delivering customer value. Nevertheless, when people talk about CRM, they are usually referring to a CRM system, a software solution that helps with contact management and personalized communications, sales and service management, productivity, and more (Salesforce, 2018). So, a Customer Relationship Management (CRM) system is a technology for managing all the relationships and interactions of an organization with its customers and potential customers with the purpose of improving business relationships. Summarizing, a CRM system helps organizations to stay connected to customers, streamline processes, and improve profitability (Salesforce, 2018).

One differential characteristic of higher education as a service industry that makes CRM an ideal strategy is the long-term commitment that students make when they enroll in a university (Meyliana, Sablan, Hidayanto, and Budiardjo, 2017). Other industries do not have the opportunity to relate to a customer's lifecycle that lasts several years. On the other hand, it is a good practice to consider students as customers since this provides a competitive advantage and enhances an institution's capacity to attract, retain and serve its students or customers (Seeman and O'Hara, 2006). When we understand students as customers a CRM system helps to achieve student satisfaction (Adikaram and Khatibi, 2016), loyalty, retention and high service quality (Badwan, Al Shobaki, Abu Naser, and Abu Amuna, 2017). Higher education institutions are also recognizing the importance of understanding the characteristics and requirements of constituents, especially prospective students, and building stronger relationships with them (Lang and Pirani, 2014). As another

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example of value, an effective CRM programme to improve service quality may induce positive advocacy behaviour from its students *(Wali and Wright, 2016)*.

2. Main Processes and Typical Departments Using CRM Solutions Specialized in Higher Education Institutions

Embracing the opportunities presented by new digital technologies is one of the most urgent challenges companies face today (Singh and Hess, 2017). Universities and other higher education institutions (hereinafter HEI) have to deal with the deep changes in the way they work and interact with their 'customers', i.e. students and their relatives, alumni and donors, academy and staff members, because these constituents are demanding more attention through different channels and immediate response and service (van Vugt and Knasys, 2015). According to the study of the American Association of Collegiate Registrars and Admissions Officers (AACRAO, 2015), the HEI departments dealing with CRM are:

- Recruiting
- Admissions/Registration
- Advising
- Student Life
- Housing
- Student Support Services (e.g., tutoring, TRIO, etc.)
- Registration
- Alumni/Development
- Career Services/Employment

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The typical user cases for a CRM in a HEI, as detailed by (Rigo, Pedron, Caldeira, and Silva de Araújo, 2016), are: enterprise relationships, marketing campaigns (personalizing marketing and communications based on student characteristics and actions as well as tracking prospective students' on-site and online interactions), high-school relationships, student/alumni relationships, internal and external events, university relationships, internal and external communication (building communities), leads management (identifying effective recruiting practices and monitoring student progression from recruitment through enrollment), social networks, crowdsourcing, research centres relationship. Moreover, CRM systems improve operations and processes (e.g.: admissions staff can automate some tasks and actions such as e-mail or SMS communications, freeing their time for a better service such as personal interactions with recruits) as (Lang and Pirani, 2014) stated. Since these are many good examples of possible uses of CRM, according to the studies of both the American Association of Collegiate Registrars and Admissions Officers (AACRAO, 2015) and (van Vugt and Knasys, 2015), CRM systems are most likely to be used mainly to support admissions/registration and recruiting, followed by alumni/development, with a poor use of other departments. Nevertheless, the CRM-related institutional activity is now expanding and diversifying as the management progressively recognizes new user cases and benefits (Lang and Pirani, 2014).

3. Reviewing Current CRM Solutions Specialized in Higher Education Institutions

When selecting the main CRM solutions for higher education institutions with the purpose of analyzing them and finding the best positioned ones, criteria like previous selections of CRM systems from other studies (Lang and Pirani, 2014; Prado, 2016; van Vugt and Knasys, 2015) as well as Internet search (Google queries on "CRM Higher Education" throws 708.000 results in January 2018) have been considered. With these criteria in mind, the solutions analysed in this study have been:

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- Radius by Hobsons (https://www.hobsons.com/emea/solutions)
- Ellucian CRM (https://www.ellucian.com/crm-for-higher-education/)
- Campus Nexus CRM (https://www.campusmanagement.com/products/radius-by-campus-management/)
- Jezebel Internet Campus Solution (https://www.jenzabar.com/blog/2014/01/02/jenzabar-internet-campus-solution/)
- Jezebel Higher Reach CRM (https://www.jenzabar.com/higher-education-solutions/continuing-education-workforce-development/jenzabar-higher-reach-crm/)
- Radius by Campus Management (https://www.campusmanagement.com/products/crm-for-higher-education/)
- Salesforce for high education (https://www.salesforce.com/solutions/industries/higher-ed/overview/)
- One World Student Information System (http://www.oneworldsis.com/)
- Azores CRM for student recruitment (https://azorus.com/)
- Maximiser CRM (https://www.maximizer.com/industry/higher-education-crm/)
- EDURME - Educational Relationship Management Engine (https://www.encamina.com/edurme-dynamics365-educacion-crm/)
- Leadsquared (https://www.leadsquared.com/higher-education-crm/)

To perform this study, the websites of the abovementioned solutions have been visited, the product sheets downloaded, the video demos watched and the trials tested where available.

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To summarize the main features, the items have been generalized enough to include the similar features of different systems in just one single item.

4. Results

The main features of current CRM systems for HEIs are summarized in the next table. The descriptions, in some cases, have been extracted exactly as defined by their producers on the website or in the product sheet of the analyzed CRM systems:

Table 1. Results obtained from the analyzed CRM features.

FEATURE	DESCRIPTION
Lead deduplication	Ensures prospective student's queries and activities to be tracked under a single record – even if they use multiple channels of communication (email, web-form, phone call, etc.).
Complete Lead Profile	Gets detailed insights into the lead's interests, preferences and hobbies by tracking their activities; has access to the prospective candidate`s social profile.
Lead Distribution	Instantly distributes student enquiries to the right departments, based on pre-defined triggers. This helps reduce response time and improve student experience.
Knowing leads inside out	Tracks prospective students in order to find out their interests and preferences (course of choice, campus location, communication channels etc.). Complete website and communication tracking.

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Sending leads the right offers	The most effective and relevant offers are sent to prospective students at the right time, for instance, scholarship details if they bounce off after viewing the course fee details.
Reaching out over the right channels	These offers are shared with the prospective students across different communication channels - email, SMS, social media retargeting (Facebook etc.), push notifications etc.
Getting communication insights	Refers to getting detailed insights into how many prospects are interacting with marketing messages and offers. For instance: email open rates, click rates, best subject lines, best devices etc.
Setting context to the conversation	Admissions team has all the information they need to engage in enticing conversations with the prospective students.
Lead Scoring	Ranks prospect students against a scale that stands for the perceived value each lead represents for the institution. The resulting score is used to determine which leads will engage in order of priority. Helps admission officers prioritize their efforts, improves efficiency, and contacts the most relevant prospects first.
Task assignment	Sets tasks for the admissions team, when a relevant event occurs. Ex: if an old lead who is a high-quality prospective student looks at the courses again, the task of calling them immediately is set.
Action enablers	Inbuilt action enablers make it very easy for admissions team to act on the system's recommendations.
Connected teams	A common tool for the institution's marketing and admissions teams that keeps them on the same page, which allows them to coordinate better and more efficiently.

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Mobile	Mobile CRM for officers attending education fairs and other college-student interaction events (e.g.: registering enquiries on-the-spot). Accesses the system anytime, anywhere, via table or smart phone.
Complete admissions insights	Tracks all the marketing, course, and admissions team´s performance. Gets complete insights into the performance of teams, courses, campuses etc.
Integration with other systems and apps	Integrates with other information systems and apps of the institution such as call centres, email systems, chats, campus on line, Student Information System, social media apps, Zapier/iftt, etc.
Lead nurturing	Develops relationships with potential students at every stage of the recruiting and admissions funnel, and through every step of the student's journey. It focuses marketing and communication efforts on listening to the needs of prospects and providing the information and answers they need.
Social listening	Monitors digital conversations to understand what students, alumni and other constituents are saying about the brand and institution online.
Business process automation	Integrates all the tasks, states, data and insights of every business process in one intelligent and centralized form.
Preconfigured process management modules	Functional modules such as: • Student accommodation management • Disability Service Management

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	• Assessment service management • Employability and placement management • Student Incident Management
Document Management integrated with student info	Stores, manages and tracks files and digital documents or images related to the student.
Reporting and Analytics	Real-time reporting and analytics tools that help institutions generate actionable data that can be used to enhance ongoing recruitment marketing activities, report on enrolment and yield, or prove ROI of the higher-education CRM efforts.
Alumni engagement and Donor Management	Maintains the connection between the institution and alumni to gain donations for the institution, provide a career path for recent graduates, support recruitment efforts, or return to school for additional training and education.
Automated scheduling	Manages meetings, events, recruitment travel, and more; completes with build-in reminders.
Automated data import and export	Manages lists, creates and sends personalized communications, monitors progress, and updates data without manual uploads.
Self-service student portal	A customizable, web-based app which displays information relevant to the student's interest with data integration both pre-application and post-application.
Multi-channel meetings	Timed, on-demand, web video interviews viewable and trackable from inside the CRM system. The interviews include timed written

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	responses, collaborative comments and ratings for each response and applicant.
Student Segmentation	Data segmentation functionality through the use of conditions and expressions within a filtering engine.
Custom communications	Delivers personalized content and craft the ultimate 1:1 student experience.

4.1 Trends

The current digital era is supposing some crucial changes such as an accelerated and deep technological change; an evolution from a physical world to a world of knowledge, a fluid dissemination of information due to globalization; and finally, a more distributed and less hierarchical organizational structure (De Juan-Jordan, Palacios-Marques and Devece, 2018). The answer to those deep changes is what we call "Digital Transformation", able to quickly evolve activities, processes, competencies and business models to take full advantage of those changes and opportunities brought by digital disruption on society, market and its different industries (Demirkan, Spohrer and Welser, 2016), such as education. One of the focuses of the Digital Transformation is on customer relationship, social media and multichannel management (Singh and Hess, 2017). So, by mapping customers with students in the world of higher education, social CRM can give universities the chance to better connect with students who are accustomed to using social platforms, since they are primarily from the millennial generation and grew up in the era of web 2.0 (Meyliana et al, 2017). Social CRM is an evolution of CRM systems that now includes social media as an important component that provides a way to manage the student engagement throughout the student's academic cycle (Meyliana et al, 2017). Social CRM is clearly one of the trends in CRM systems.

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Customer satisfaction should also receive a boost as universities will be able to deliver "service personalization" since the social CRM platform will be able to better determine student's needs (Wali and Wright, 2016). More and more functionalities and apps related to social media and social engagement will be added in the future to CRM solutions for higher education institutions. Apps as complements to CRM, social media integrated in CRM and personalization tools are a trend in the CRM for the HEI world.

Some of the CRM analyzed already include functionalities regarding student success and retention. For example, Ellucian CRM lets factor student characteristics and behavior over time into course and success scores to accurately identify risk, as long as automated and tailored intervention strategies after identifying at-risk students. Although some specific "student success" solutions can be found separately as a product, including these functionalities as part of the CRM for HEIs seems like a tendency.

As the digital disruption is transforming education, the presence of technologies such as the Internet of Things (IoT), the Internet of Everything (IoE), social media applied to the classroom, 3D printing, web 2.0 and web 3.0, chatbots or the Artificial Intelligence, for instance, are becoming more and more common in higher education (Thomas, 2017) and those innovations are also a trend in the CRM systems. In the case of Einstein, an artificial intelligence module over SalesForce CRM, it learns from all that data to deliver predictions and recommendations based on the institution`s business processes (Henschen, 2017). So, it is more than conceivable that artificial intelligence will be a common component in Higher Education's CRM systems in the near future. Possible uses may include: matching the best academic product for the right student with the optimal argument, predicting problems with the student, identifying the best moments and touchpoints with the constituents, etc.

Chatbots are also a predictable component of HIE's CRM systems, as long as potential students may want to get information about the academic products through different

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channels and different moments or ask questions to the Institution's chatbot in natural language or just report a problem through a conversation.

5. Conclusions

A CRM solution helps institutions to focus on the organization's relationships with individuals — including customers, service users, colleagues, or suppliers — throughout their lifecycle, including finding new customers, winning their business, and providing support and additional services throughout the relationship (Salesforce, 2018). The benefits of implementing CRM in a HEI include a student-centric focus, improved customer data and process management, increased student loyalty, retention and satisfaction with the college's programs and services (Seeman and O'Hara, 2006), but even though the HEI's main customer is the student, there are others stakeholders that a CRM project must consider (Seeman and O'Hara, 2006), such as prospective students, alumni, faculty and staff, and current and prospective donors (Lang and Pirani, 2014).

Educational institutions leaders, by adopting CRM initiatives, try to increase performance, promote better management practices, and improve the institution's relationship with current and potential students, especially in higher education (Badwan et al, 2017) and that may be possible because of the features and functionalities that CRM systems enable for them and which have been listed in this article. The wide range of features of CRM systems give many ideas of the business needs that HEI's management should implement in their organizations.

This study has an ephemeral validity since CRM systems are evolving at an accelerated pace and, in a few months, there may be new solutions in the market or new technologies applied to the CRM concept that today are even impossible to guess. Another limitation of this study is the bandwidth of systems that we can analyze, only focused on the best-known solutions in the market, even though innovation happens not only in the most consolidated

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companies but also in the least known and star-ups. Future research could contrast these results with the analysis of new tools and CRM systems all over the world.

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