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# Identifying And Prioritizing The Factors Affecting The Implementation Of The Active University-Student Relationship Management (U-SRM) In The University Using The Vickor Method (Case Study: University Of Georgia)

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## Abstract

Purpose of this research is Identifying and prioritizing the factors affecting the implementation of the active university-student Relationship Management (U-SRM) in the university using the Vikor method (Case study: University of Georgia). This research is an applied research and can be considered as a Exploratory research. The statistical population of this research is the students of selected university. the sample size is measured using Morgan table and as a result: sample size is 384 students. To collect the theoretical foundations of the research, library method and documentary studies were used the data collection tool was a researcher - made questionnaire base on Paired comparison questionnaire. In this study, the incompatibility rate has been used to determine the reliability. Given that this rate is higher than 0.1, It shows its reliability. In this study, after collecting the questionnaires and extracting the responses to transform the initial data from the questionnaires, the questionnaires were used in use with software package excel as well as expert choices. In this section, the questions are discussed by entropy and vikor to weighting and prioritize the variables. According to the results of Vikor ranking, the operational index had the most impact and also the technical index had the least importance

**Keywords:** Active university-student Relationship Management (U-SRM)

## Problem Definition

Increasing the quality of education and educational services is one of the main goals of the educational system in each country. Universities, as organizations providing these services at the highest level, welcome different groups of students and learners, and therefore satisfy them and improve and enhance the level of relationship with them through the process of student relationship management. ¬ can be the basis for achieving the goals of the educational system and the excellence of higher education. (Tabatabai Nasab et al., 2014) The student is the main customer in the educational centers. Very close supervision by institutions has led universities to seek to improve their quality by estimating the expectations and needs of students. To increase the quality of services in the higher education system to increase student satisfaction (Abu Amuna et al., 2012). Higher education and universities are known as service industries, so it is important to meet the expectations and needs of their customers, who are on the one hand students. Academic institutions can also pursue their relationship with students more effectively and improve student retention rates by developing strategies called student relationship management (Dashldis et al., 2005). Using SRM instead of known CRM term for "Student Relationship Management", here the "U-SRM" is a strategy known for understanding the needs and business behaviors of students as customers to lead to stronger relationships with them. Active

student-university relationship management (U-SRM) through real-time mechanisms will be in full integration with the university education system and general student records such as academic record, full profile, student semesters, related courses and grades, etc. available in university software and databases. Student communication management is a flexible software on which all the requirements of the university can be applied even by system administrators in the university (after passing training courses) (jehad et al., 2017). This solution includes different university services in different fields. For example, in the field of education, processes such as presenting a course to a teacher, eliminating a semester, deleting a course, adapting a unit, issuing a certificate of employment, issuing transcripts and transcripts, or more generally issuing various types of certificates, study leave, etc. can be implemented. In such a way that after sending the student request from each communication channel, a request is registered in the student communication management software and all the necessary prerequisites for the student are automatically checked and the result will be announced to them at each stage. If the student has all the necessary prerequisites to submit the application, the application will be activated automatically and, if possible, even automatically applied in the system. There may be many factors in this regard and about the active student-university relationship that with their knowledge and accurate identification and their application can help the effectiveness of the implementation of active university-student relationship management (U-SRM). Researcher studies show that no research with this title has been conducted in the Georgian universities so far and its dimensions are unknown. Therefore, in this research, will review and answer this basic question: What are the factors affecting the implementation of the active university-student Relationship Management and how these factors are prioritized.

## Literature Review

Jehad et al (2017) studied Adopting Technology for Customer Relationship Management in Higher Educational Institutions. Some statistical tools were used for analyzing the data and testing the hypotheses, including Spearman correlation coefficient for Validity reliability correlation using Cronbach's alpha, Frequency, and Descriptive analysis. The overall findings of the current study show that all the features were important for student and it was critical success factors, at the same time, websites were providing all the features discussed by the theory whereas students showed their willingness to use those features if provided. It is also discovered that implementing Electronic Customer Relationship Management can cause customer satisfaction, loyalty, retention and high service quality as students pointed to be a customer

Amuna et al (2012) studied Understanding Critical Variables for Customer Relationship Management in Higher Education Institution from Employees Perspective. A number of statistical tools were intended for hypotheses testing and data analysis, including Spearman correlation coefficient for Validity, reliability correlation using Cronbach's alpha, and Frequency and Descriptive analysis. The overall findings of the current study show that all the features were important for staff and it was critical success factors, at the same time, websites were providing all the features discussed by the theory whereas staff showed their willingness to use those features if provided. It is also discovered that implementing Electronic Customer Relationship Management can cause staff retention, were provided efficiently and needed to be improved. Research limitations: The survey findings were based on QOU employee in Palestine, UAE and KSA branches not included in the study.

Tabatabai Nasab et al. (2014) studied student relationship management: a new approach to higher education excellence (case study: Yazd University). First, SRM dimensions were identified and introduced through factor analysis, and then the conceptual framework of the research was tested by structural equation modeling using LISREL software. The results showed that SRM has a positive and direct relationship with different types of justice, including distributive, procedural and narrative.

There is also an inverse relationship between procedural and behavioral justice and students' destructive behavior. On the other hand, there was a direct relationship between procedural justice and perceived events with students' citizenship behavior.

Farhangi et al. (2007) in their research also examined the needs of students from the student relationship management system at the University of Tehran. To meet the needs, using the life cycle of student relations and Yan Chastan model, students' needs were identified from an SRM system. . The results show that the needs of students in the second stage of their relationship life cycle can be divided into three main categories of information needs, exchange and communication.

Sohrabi and Khanlari (2018) in a study entitled "Assessing the organizational readiness of higher education institutions in the implementation of student relationship management: a case study of the University of Tehran" found that among the two factors studied, only the technology factor is in good condition and The university is not prepared to implement SRM in other factors.

Moghimi (2011) states that real-time response to customers' problems and knowledge sharing in one hand and collaborative CRM in the other hand would definitely increase the operational CRM and customer satisfaction. As a result factors regarding these issues were added to our criteria for research too.

Moghimi and Abramishvili (2021) believe that none-academic education including financial strengthening or sustainable-development trainings must be added to universities' curriculum.

## Research Objectives

- Identifying the factors affecting the implementation of the active university-student Relationship Management (U-SRM) in the university using the Vickor method
- prioritizing the factors affecting the implementation of the active university-student Relationship Management (U-SRM) in the university using the Vickor method

## The Methodology

This research is an applied research because it seeks to achieve a scientific goal and emphasizes problem solving and includes a set of methods that aim to describe the conditions or phenomena. In terms of method, it can be considered as a "Exploratory Research". The statistical population of this research is the students of selected university. Given that the exact volume of the society is unclear due to active and inactive study status, the sample size is calculated by using Morgan table and measured as 384 students. To collect the theoretical foundations of the research, library method and documentary studies were used the data collection tool was a researcher - made questionnaire base on Paired comparison questionnaire. Also the incompatibility rate has been used to determine the reliability .Given that this rate is higher than 0.1 it shows its reliability. After collecting the questionnaires and extracting the responses to transform the initial data from the questionnaires, the questionnaires were used with software package excel as well as expert choice then the answers were discussed by entropy and vikor to weighting and prioritize the variables.

### Factors (Agents) Describing CRM Success for students at University of Georgia (SRM)

Current factors were chosen according to secondary data available at university and deep interview with university heads of the operational and students' touch-point departments.

1. Technological Factors/ IT Infrastructural Agent

2. Educational Factors/ School Agents

3. Structural Factors/ Work-Flow Agents

4. Operating Factors/ Staff Agents

After developing the agents for Vikor model, we needed metrics as criteria to define these 4 factors. Three focus groups were shaped one from middle-managers and two from students (one

undergraduate level and one higher graduate) and metrics were defined as below:

| | Metrics to Define Four Factors of SRM |
|---|---|
| **1.** | University management support |
| **2.** | Financial Issues |
| **3.** | Students' cooperation and self-governance Teams |
| **4.** | UG technical structure (Students' online Platform) |
| **5.** | Staff Teaching and Communication Skills |
| **6.** | Technical and Strategical plan |
| **7.** | Efficient implementation of regulations. |
| **8.** | Problems of the cross - sectional decisions |
| **9.** | Know the benefits from this work to all stakeholders. |
| **10.** | Response Time |
| **11.** | Creating alternative ways to get more flexibility |
| **12.** | Use Strong steps and Justified performance |
| **13.** | None-Academic Educations and Trainings |
| **14.** | Knowledge Management System and Sharing Platforms |
| **15.** | Easy access of students to scores |
| **16.** | Efficient and Easy system to select credits |
| **17.** | Accurate support of the IT system |
| **18.** | solving deficiencies at the lowest time |
| **19.** | Confronting the old education system with the new system |
| **20.** | Controls to Protect Information Assets |
| **21.** | External Sources of Knowledge |
| **22.** | collaboration between different departments of the university |
| **23.** | Synch and connecting the new changes with old systems |
| **24.** | Making compatible applications |
| **25.** | Create a user friendly environment in the system |

## Data analysis

### Analysis based on vikor

In this study, there are 25 criteria and 4 alternative factors that are ranked according to the VIKOR method. Results shows the type of criteria and weight allocated to each criterion.

**First Step: Average opinion**

| Matrix | Structura | Operating | Technologic | Education | Criteria | Scale |
|---|---|---|---|---|---|---|
| **Metric 1** | 8 | 7 | 7/5 | 6/5 | Positive | 0/0073 |
| **Metric 2** | 4/5 | 5 | 5/5 | 8 | positive | 0/0638 |
| **Metric 3** | 7 | 8 | 5/5 | 7/5 | positive | 0/0228 |
| **Metric 4** | 4 | 4 | 6 | 8 | positive | 0/1088 |
| **Metric 5** | 8/5 | 6/5 | 5 | 5/5 | positive | 0/0526 |
| **Metric 6** | 7 | 6/5 | 8 | 9 | positive | 0/0194 |
| **Metric 7** | 5/5 | 6 | 6 | 8 | positive | 0/0268 |
| **Metric 8** | 6 | 6/5 | 6 | 8 | positive | 0/0182 |
| **Metric 9** | 6/5 | 6/5 | 7 | 8/5 | Positive | 0/0158 |
| **Metric 10** | 8 | 6/5 | 5 | 7 | Positive | 0/0338 |
| **Metric 11** | 6 | 3 | 7/5 | 6/5 | Positive | 0/1171 |
| **Metric 12** | 7 | 7/5 | 7/5 | 8 | Positive | 0/0027 |
| **Metric 13** | 9 | 7 | 6/5 | 5/5 | positive | 0/0399 |
| **Metric 14** | 7 | 6/5 | 6 | 7/5 | positive | 0/0085 |
| **Metric 15** | 6 | 6/5 | 7 | 7/5 | Positive | 0/0085 |
| **Metric 16** | 7 | 7 | 7/5 | 6/5 | positive | 0/0031 |
| **Metric 17** | 5/5 | 4 | 4 | 5 | positive | 0/0241 |
| **Metric 18** | 5/5 | 7/5 | 7/5 | 4/5 | positive | 0/0545 |
| **Metric 19** | 8/5 | 4/5 | 7/5 | 4 | positive | 0/1219 |
| **Metric 20** | 6/5 | 4/5 | 5 | 7 | Positive | 0/0398 |
| **Metric 21** | 6 | 4 | 6/5 | 8 | positive | 0/0698 |
| **Metric 22** | 6/5 | 6/5 | 5/5 | 7 | Positive | 0/0092 |
| **Metric 23** | 7/5 | 6/5 | 7/5 | 6/5 | positive | 0/0063 |
| **Metric 24** | 6/5 | 8/5 | 6 | 5/5 | Positive | 0/035 |
| **Metric 25** | 4 | 8 | 8/5 | 8 | positive | 0/0902 |

in this index, an index that has a positive utility, the index of profit and index that has a negative utility is a hallmark of cost.

**Step 2: normalization or the matrix**

| Matrix | Structur | Operatin | Technolo | Educatio |
|---|---|---|---|---|
| **Metric 1** | 0/5501 | 0/4813 | 0/5157 | 0/4469 |
| **Metric 2** | 0/381 | 0/4233 | 0/4657 | 0/6773 |
| **Metric 3** | 0/4956 | 0/5664 | 0/3894 | 0/531 |
| **Metric 4** | 0/3482 | 0/3482 | 0/5222 | 0/6963 |
| **Metric 5** | 0/6524 | 0/4989 | 0/3838 | 0/4221 |
| **Metric 6** | 0/4554 | 0/4229 | 0/5205 | 0/5855 |
| **Metric 7** | 0/4266 | 0/4653 | 0/4653 | 0/6205 |
| **Metric 8** | 0/4494 | 0/4869 | 0/4494 | 0/5992 |
| **Metric 9** | 0/4532 | 0/4532 | 0/488 | 0/5926 |
| **Metric** | 0/5959 | 0/4841 | 0/3724 | 0/5214 |
| **Metric** | 0/5009 | 0/2504 | 0/6261 | 0/5426 |
| **Metric** | 0/4661 | 0/4994 | 0/4994 | 0/5327 |
| **Metric** | 0/6325 | 0/4919 | 0/4568 | 0/3865 |
| **Metric** | 0/5167 | 0/4798 | 0/4429 | 0/5537 |
| **Metric** | 0/4429 | 0/4798 | 0/5167 | 0/5537 |
| **Metric** | 0/4994 | 0/4994 | 0/535 | 0/4637 |
| **Metric** | 0/5888 | 0/4282 | 0/4282 | 0/5353 |
| **Metric** | 0/4308 | 0/5874 | 0/5874 | 0/3525 |
| **Metric** | 0/6622 | 0/3506 | 0/5843 | 0/3116 |
| **Metric** | 0/5563 | 0/3852 | 0/428 | 0/5991 |
| **Metric** | 0/477 | 0/318 | 0/5167 | 0/6359 |
| **Metric** | 0/508 | 0/508 | 0/4298 | 0/547 |
| **Metric** | 0/5344 | 0/4631 | 0/5344 | 0/4631 |
| **Metric** | 0/4835 | 0/6322 | 0/4463 | 0/4091 |
| **Metric** | 0/272 | 0/544 | 0/578 | 0/544 |

In this step, we scale the scales in the decision matrix without scale. In this way, each of the values is divided into the size of the vector associated with the same index.

**Step 3 : weight of the normalized matrix**

| Matrix | Structur | Operatin | Technolo |
|---|---|---|---|
| **Metric 1** | 0/004 | 0/0035 | 0/0038 |
| **Metric 2** | 0/0243 | 0/027 | 0/0297 |
| **Metric 3** | 0/0113 | 0/0129 | 0/0089 |
| **Metric 4** | 0/0379 | 0/0379 | 0/0568 |
| **Metric 5** | 0/0343 | 0/0262 | 0/0202 |
| **Metric 6** | 0/0088 | 0/0082 | 0/0101 |
| **Metric 7** | 0/0114 | 0/0125 | 0/0125 |
| **Metric 8** | 0/0082 | 0/0089 | 0/0082 |
| **Metric 9** | 0/0072 | 0/0072 | 0/0077 |
| **Metric** | 0/0201 | 0/0164 | 0/0126 |
| **Metric** | 0/0587 | 0/0293 | 0/0733 |
| **Metric** | 0/0013 | 0/0013 | 0/0013 |
| **Metric** | 0/0252 | 0/0196 | 0/0182 |
| **Metric** | 0/0044 | 0/0041 | 0/0038 |
| **Metric** | 0/0038 | 0/0041 | 0/0044 |
| **Metric** | 0/0015 | 0/0015 | 0/0017 |
| **Metric** | 0/0142 | 0/0103 | 0/0103 |
| **Metric** | 0/0235 | 0/032 | 0/032 |
| **Metric** | 0/0807 | 0/0427 | 0/0712 |
| **Metric** | 0/0221 | 0/0153 | 0/017 |
| **Metric** | 0/0333 | 0/0222 | 0/0361 |
| **Metric** | 0/0047 | 0/0047 | 0/004 |
| **Metric** | 0/0034 | 0/0029 | 0/0034 |
| **Metric** | 0/0169 | 0/0221 | 0/0156 |
| **Metric** | 0/0245 | 0/0491 | 0/0521 |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Educatio** | 0/0033 | 0/0432 | 0/0121 | 0/0758 | 0/0222 | 0/0114 | 0/0166 | 0/0109 | 0/0094 | 0/0176 | 0/0635 | 0/0014 | 0/0154 | 0/0047 | 0/0047 | 0/0014 | 0/0129 | 0/0192 | 0/038 | 0/0238 | 0/0444 | 0/005 | 0/0029 | 0/0143 | 0/0491 |

The decision matrix is actually parametric, and it is necessary to be quantitative, in order to determine the decision maker for each weighted index, the weights are multiplied by the normalized matrix.

**Step 4 : Establish a positive and negative optimal solution**

| Matrix | **Metric 1** | **Metric 2** | **Metric 3** | **Metric 4** | **Metric 5** | **Metric 6** | **Metric 7** | **Metric 8** | **Metric 9** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** | **Metric** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| + | 0/004 | 0/0432 | 0/0129 | 0/0758 | 0/0343 | 0/0114 | 0/0166 | 0/0109 | 0/0094 | 0/0201 | 0/0733 | 0/0014 | 0/0252 | 0/0047 | 0/0047 | 0/0017 | 0/0142 | 0/032 | 0/0807 | 0/0238 | 0/0444 | 0/005 | 0/0034 | 0/0221 | 0/0521 |
| - | 0/0033 | 0/0243 | 0/0089 | 0/0379 | 0/0202 | 0/0082 | 0/0114 | 0/0082 | 0/0072 | 0/0126 | 0/0293 | 0/0013 | 0/0154 | 0/0038 | 0/0038 | 0/0014 | 0/0103 | 0/0192 | 0/038 | 0/0153 | 0/0222 | 0/004 | 0/0029 | 0/0143 | 0/0245 |

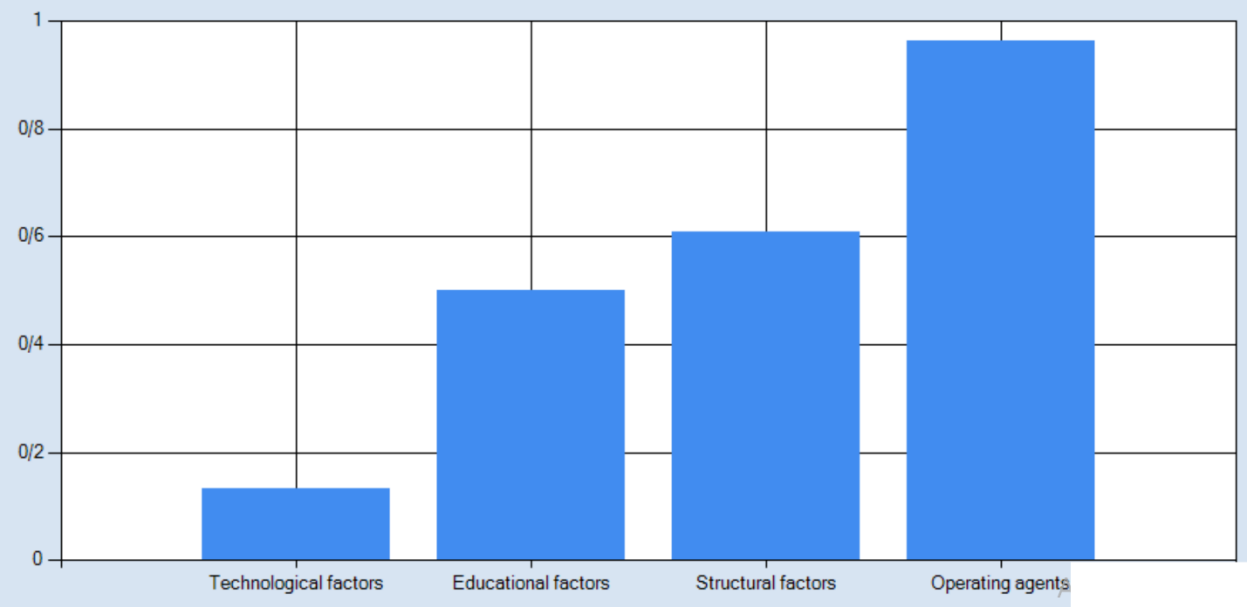
Two virtual alternatives are actually the worst and best solution. Criteria 19 and criteria 11 achieved the most importance among criteria.

**Step 5: Determine the Value of Utility**

| utility and regret | Utility ( S ) | lament (R) |
|---|---|---|
| **Structural factors** | 0/5084 | 0/1088 |
| **Operating Staff** | 0/7012 | 0/1171 |
| **Technological factors** | 0/4596 | 0/0544 |
| **Educational factors** | 0/373 | 0/1219 |

**Step 6 : Calculation of the vikor index ( Q ) Ranking of Options**

| Conclusion | vikor Index |
|---|---|
| **Technological factors** | 0/132 |
| **Educational factors** | 0/5 |
| **Structural factors** | 0/6093 |
| **Operating agents** | 0/9644 |




According to the results of Vikor ranking, the operational index had the most impact and also the technical index had the least importance.

## Conclusion and Suggestions

Universities are also employing CRMs to facilitate social listening and implement multi-channel marketing efforts in order to advertise courses and nurture relationships with prospective students, with the aim of converting them into graduates - and subsequently champions - of their institution down the line. In a higher education context, social listening is a way of monitoring digital conversations to gain an informed understanding of how stakeholders or prospects engage with an institution. CRM offers universities the opportunity to build and maintain relationships with their students, a task which is essential for schools. Educational institutions are constantly pitted against each other in a battle to capture a students' attention and it's in their primary interest to engage with the students and share valuable information about their university. It is very important for universities to differentiate themselves from their competitors and this involves sharing information with students on how the school can empower them and position them for success in the future. But universities also need to retain and to be able to track the past interactions with their students. In a complex, multi-faceted environment where student interactions are often forgotten, CRM allows universities to centralize their communication and engagement with an important audience. CRM systems provide universities numerous benefits and allow them to target various groups simultaneously. Knowledge Management and None-academic education (Informal and disciplinary education) have very low value in this study which is obviously showing what is missing for stronger SRM inside the university. Nevertheless the educational and technological factors had lowest value at the final table showing clearly that problems students are facing have changed their focus on academic life they need to focus on. A CRM for higher education is supposed to enables institutions to keep their stakeholder's information updated by facilitating and tracking every interaction the university has with them across different platforms, no matter where they are in the world. The results here have clear guidelines for university authorities to focus on real-time information update and collaboration of different departments including the touch points and schools. SRM is designed to help staff by simplifying their workflow and in turn, improving their relationships with students. The outcome will be increased admissions and retention rates, better communications with students and a happy team.

## Suggestions for Customized CRM according to the current Findings

- CRM allows universities to centralize and efficiently manage all their information. Especially with the growth in cloud-based solutions, CRM users can access this functionality from anywhere at any time. A cloud-based CRM solution allows schools to save time by eliminating the need for the universities to install, manage and support the CRM system. Instead, the faculty and staff can spend their time in using the application to manage their interactions, make informed decisions that help them better manage their day-to-day activities with their students and other stakeholders. Staff needs huge education based on new understanding for universities commercialization model and their moral, scientific and customer-based responsibilities.
- CRM systems provide the ability for an university to build relationships with prospective students, meet the needs of existing students and maintain the ongoing relationships with the alumni which is a key necessity for schools. CRM not only helps universities achieve these goals, but also coordinates them in a efficient and timely manner. SRM must give the decision makers the platform and real-time of the factors affecting students satisfaction and dissatisfaction. The results must also be shared within organization and different departments and a system to evaluate the effect of these sharing must be in place.

- Universities contain a variety of departments and keeping track of various activities can be difficult. With CRM, schools can manage a large variety of tasks and also empower their staff by allowing them to make more informed decisions. With the use of **U-SRM** systems schools can:
  - Gather and manage information about various operations including transportation, food services, etc.
  - Monitor a department's performance and help facilitate important decisions that can be beneficial to them
  - Faculty and departmental information can be digitalized and efficiently managed with a CRM system. Synchronization is very effective strategy to help right and left hand of the organization to work effectively and vision-based tactics,
  - Empower their faculty with mobile features that allow them to access student information and educational resources. Staff and Operational Agents were having the highest value (lowest efficiency) in the study. Training and Knowledge management tools (Internal and external knowledge sharing) will give the university very strong empowerment means

- CRM systems allow universities to communicate with a variety of audiences efficiently, and this allows them to strengthen their relationships with these different stakeholders. With the use of **U-SRM** systems schools can:
  - Distribute information to parents about program information or student achievements
  - Marketing Automation tools will be analytically and operationally available to find, measure, implement and enhance.
  - Centralize student information and make it readily accessible across various departments
  - Improve cross channel communications and target their audience more efficiently

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