

Need for and Relevance of Customer Relationship Management in Engineering Colleges

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Abstract Modern education, with special reference to higher education (HE), is far taken out of the traditional meaning of education. A number of business features have infiltrated these institutions of HE where students assume the place of a customer. In the present business scenario customer relationship management (CRM) technology assumes an important role in managing customers. Therefore a relevant question would be to know whether educational institutions need to implement this technology to manage their constituent relationships. This paper makes an attempt to evaluate studies on commercial features of a modern educational system and then present the findings of a study conducted to know the relevance of CRM Technology in HE. An evaluation is also made to know the awareness of the concept of CRM among the educators. The findings show that the educators' awareness of CRM strategies is good, of CRM concepts is poor and of practice is average. Further, an overwhelming majority of the respondents felt that CRM is relevant for educational institutions in the present scenario.

Keywords Customer relationship management (CRM), engineering colleges, higher education.

I . Introduction

Education, simply defined, is a process of teaching and learning (Oxford 2006). Traditionally education was considered very sacred especially in India, and only a few could afford it. A teacher evoked great respect. However, just as all aspects have changed in the modern society, education with special reference to higher education too has transformed beyond the recognition of the traditional definition. Added to this, a number of the features of business organization also seem to be the guiding principles of educational institutions of the twenty first century.

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II. Student as a Customer in Higher Education - A Review

Every business organization has its customers. This concept of customer has moved even into the field of higher education (Bejou, 2005). Hill (1995) considers students of universities as primary customers. Student-perceived service quality is considered to be a competitive factor in higher education (Yeo, 2008). High levels of service quality and customer satisfaction leading to customer loyalty, purchasing behavior and customer referrals have been concepts related to business concerns. Douglas et al. (2006) mentions this to be a trait of a customer in higher education as well, though the most important aspects considered by them are academic ones than the physical aspects. Studies also point to the fact that higher education, just as in a business organization, has three types of customers, i.e., right, wrong and at risk, and that they need to be similarly treated: retain the right, keep away the wrong and convert the at risk ones to the right type using the right strategies (Walker, 2010).

Branding as a business concept is applied to the higher education institutions these days. Studies have highlighted the importance of branding in higher education by pointing that the students and their parents evaluate the brands and features of these brands before selecting an institution for higher studies (Lowrie, 2007; Curtis et al., 2009). Evidences of education as a global phenomenon (Binsardi and Ekwulugo, 2003; Coates and Adnett, 2003; Farr, 2003), presence of mercerization and deregulation of universities (Allen and Shen, 1999; Dill, 2003; Young, 2002; Taylor, 2003; Jongbloed, 2003; Maringe, 2010) have also been found by many studies.

Traditionally, the concept of marketing in higher education could never be thought of. In the present day, literature speaks widely on the need for marketing in higher education and the fact is evident from the various marketing efforts of the educational institutions in procuring students. A high rate of commission paid to obtain a student by such institutions is very common these days. Among the five predictions for University marketing for 5 years made by Annandale (2013) in 2012, measurement of marketing effectiveness has been one.

Management of information for the purpose of customization has also pervaded the higher education field. No longer can these institutions provide what they thought was best for the candidate, but are required to provide tailor made courses, providing the candidates value for their money and making them employable in the vocation of their choice. Curriculum at the 'speed of light' is what is expected today (Helyer and Lee, 2010).

However, the application of business principles and concepts to higher education (HE) has also seen opposing points of view. Opponents of HE

marketing believe that the business world morally contradicts the values of education (Hemsley-Brown and Goonawardana, 2007). Student as a customer (Vaill, 2008), marketisation of education (Barrett, 1996; Franz, 1998) have been strongly opposed. But the factual state of affairs at the educational institutions today very clearly speaks for the former than the latter.

III. Customer Relationship Management

1. Definition of CRM

CRM is a natural development of the concept of Relationship marketing though it takes a wider view on the customer. It emerged as an answer to decreasing customer loyalty in competitive markets, and was enabled by new technologies (Reichold et al., 2006) and aims to add value to the customer as to the organization, by establishing a win-win relationship. There are numerous and at times, conflicting definitions of CRM. Gartner Group (2000), the foremost consultant firms in the CRM market defines it as “a management discipline, a philosophy even, that requires businesses to recognize and nurture their relationship with customers. With CRM, individual customers’ needs and preferences are available to anyone in the business working at the customer interface, regardless of channel. Each customer is treated as an individual in a relationship that feels like one-to-one.” According to Payne (2006) CRM is “a process that approaches all aspects of identifying customers, making customer relationships, creation of knowledge about customers and shaping their perception on the organization and its products” (Payne, 2006).

CRM Guru (2005) defines CRM as a “business strategy to select and manage the most valuable customer relationships. CRM requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes. CRM applications can enable effective customer relationship management, provided that an enterprise has the right leadership, strategy, and culture.”

For the purpose of this study CRM is meant as a dynamic strategy which intends to:

- Understand an existing customer and his needs and tries to do the same with any newly acquired one.
- Gets into his wallet and assesses his endowments, his needs and endowments to suggest to him fitting products/services – those which he has already tasted or otherwise.

- Endears the organization to the customer so much so that the customer feels no need to look elsewhere, added to which converts him to be its voluntary advocate.
- Gears the whole workforce attitudinally to a deeply service oriented culture by empowering each of them physically, socially and emotionally.
- Takes the aid of technology to collect, analyse and provide all the stakeholders with all the information necessary in order to realize all these above aspects.

2. Objectives of CRM

From the above section on definition, it may be concluded that the basic objectives of CRM are:

1. Extending/widening customer relationships by acquiring new and profitable customers by offering products and services of interest to the potential customers by distinguishing profitable customers.
2. Lengthening relationships with existing profitable customers keeping in mind that a highly satisfied customer stays loyal longer, buys more new products and upgrades, talks favourably about the company to the prospects, is less sensitive to price, offers ideas for new products and service to the company and costs less to serve than new customers.
3. Deepening customer relationships by transforming unimportant customers into highly profitable one's and also
4. Keeping customer information consistent throughout the organisation and make it available across all touch points where company interacts with the customers.

IV. Objectives of the Study

The banks have been primary candidates for CRM implementation in India with most of the foreign and new generation banks already making differing degrees of use of this technology. On the contrary, CRM seems to be supporting even a small business house in the west. However, CRM has not caught up with even larger business concerns other than banks in India, though other modules of the Enterprise Resource Planning (ERP) software like FRM, SCM, HRM, have been well utilized. Therefore, as of now the use of CRM in education seems to be a far cry.

In such a situation evaluating the knowledge of the concept of CRM among

the educators and its relevance to education was felt to be the first step in understand the need for CRM in HE. CRM is basically a child of the software engineering field, i.e., information technology, computer application, etc. Thus, considering need and benefits of CRM to higher education, and the ability of engineering colleges to indigenously produce and maintain such software, it was felt necessary to conduct a study in engineering colleges of Dakshina Kannada:

1. To evaluate need for CRM in higher education through literature review.
2. To evaluate the awareness of the CRM concept, the strategies and the technology among the faculty of engineering colleges.
3. To evaluate the respondents' point of the need for CRM implementation in HE.

V. Sampling and Methodology

A number of colleges have mushroomed in India to provide technical education and among them the seats for courses with software content are sold like hotcakes. These courses have in fact attracted the best brains in India and this is very much a fact in one the most literate districts of the country, i.e., Dakshina Kannada. Software has also become a part of the curriculum of almost every other stream of engineering, as information technology has now become a part of all other technologies. A common feature with most of the engineering colleges is an MBA course offered by the same technology university to engineering and non-engineering candidates after their graduation. If a software course introduces practical learning of technologies like CRM, theoretical learning of CRM forms a part of MBA course content. The study was taken up in the district of Dakshina Kannada which houses 17 engineering colleges, most of them located within a radius of 10 to 15kms from the heart of Mangalore city. Ten colleges were selected for the purpose of this study. Of these 9 colleges are operating under the Vishveshwarayya Technology University (VTU) and one is a deemed university. The names of ten engineering colleges selected for the study are given in Appendix.

This study was based on the responses of the educators in these engineering colleges across various courses of study. Two hundred samples were selected on a convenience sampling basis from ten engineering college, of which 123 responded and 120 could be used for the study. The educators of the departments of MBA, MCA, information science, computer science, electronics and communication, mechanical, electrical, civil, chemical, telecommunication departments were taken as respondents. The mean age of the respondents was: Male 34 years, female 25 years. 52% of the respondents

were assistant professors, 26% were lecturers, 15% were associate professors and 7% were professors.

The data collected was grouped and summarized using mode and percentages to evaluate the awareness (knowledge) of educators regarding CRM strategies, concepts and practices. Thereafter the Kruskal Wallis H Test and Pearson's Chi square test were applied to the data to evaluate the concurrence of their opinions.

VI. Need for CRM in Higher Education – A Literature Review

Whatever the findings of studies, there is no denying that the concept of 'quality' has assumed great importance in higher education (Demetriou, 2008). The fact that the stakeholders are on the lookout for institutions which close the gap between their expected and actual performance (Brigham, 1994) very clearly indicates the need for continuous monitoring of the quality to remain competitive. Though the definition of quality in higher education has been much debated (Becket and Brookes, 2006; Shank et al., 1995), there is no denying the fact that quality attracts the students to an institution.

Studies point to the fact that quality enhancement in higher education encompasses treating students with dignity and giving them directions to solve their problems, being responsive to them and their parents and giving timely answers to their questions, understanding their needs to provide service of the required perception, soliciting their feedback and upgrading the service meaningfully with the right kind of evaluation of the feedback received (Joseph et al., 2005; Brochado, 2009; Avdjiev and Wilson, 2002).

CRM, implemented in the right letter and spirit, has claims to address the above factors in helping an educational institution in bridging the gap in the stakeholder's expectations and its performance. Therefore customer relationship management (CRM) specifically tailored to an institution's relationship management needs is the best way to attract, retain and build relationships with the students and other stakeholders in education. A number of studies have claimed that CRM provides solution to the problems faced by the present-day educational institutions of higher learning (Kotler and Fox 1995; Grant and Anderson, 2002; Hayes and College, 2009; Nair et al., 2007; Virgiyanti et al., 2010; Daradoumis et al., 2010). Moreover sub-sections of articles 12 of the World Declaration for Higher Education for the 21st Century adopted by the World Conference on higher education way back in 1998 is evaluated, CRM seems to be a solution to the points mentioned therein (UNESCO Division of Higher Education, 1998). A number of vendors have evolved CRM solutions specific to educational institutions and the concept of

cloud computing has given a further fillip to it.

VII. Data Evaluation and Discussion

The responses to the questions were evaluated to know the awareness of CRM among the respondents and the need to implement CRM in higher education. This has been discussed below:

1. Awareness of CRM

Awareness of CRM was evaluated in three areas, namely, the CRM strategies, CRM concepts and CRM technology. Data was evaluated across the eleven colleges and also across the departments surveyed. The awareness of respondents of CRM strategies was evaluated by presenting a set of twenty CRM strategies. They were required to state the importance of each strategy on a scale of 6. The data revealed that 57% of the staff had good knowledge of the strategies based on the right answers provided by them. Among the colleges, the deemed university lead the others in awareness of strategies (72.5%). Awareness of CRM strategies was best among computer engineering departments (80%) followed by the MBA (68%) faculty across the ten colleges.

CRM encompasses a number of unique sub-concepts. The awareness of these was evaluated by presenting eleven of them on a scale of five, i.e., whether they have expert, technical, theoretical, basic knowledge or not heard of the concept. The summary of the data revealed that 30.1% don't have any knowledge of the concepts, 31.4% have basic knowledge, 20.7% have theoretical knowledge of the working of CRM, 14.3% have technical knowledge of its working and a mere 3.5% have expert technical and practical knowledge of its working. Two colleges lead in expert knowledge though with a mere 5.6% one of them being the deemed university. However, a third college led the others in the practical knowledge (36.4%) and their overall responses showed that they had fairly good knowledge of the concepts compared to other colleges. The IT department led the other departments in the knowledge of CRM concepts (18.2%). However, even among the most aware, the knowledge was mainly restricted to technical, practical, basic knowledge with a very low percentage with the expert knowledge (3.3%).

There are a number of CRM software as well as many producers in practice. Awareness of the CRM practices was thus evaluated by providing a set of seven factual questions on CRM in practice. They were provided with a scale of four to tick the right answers, i.e., (software, CRM concept, software

producing company, don't know). The right answers were evaluated versus the wrong ones and the data revealed that most scored well (60-70%) on four of the practices, 40% on one practice and very low (27% and 13%) on two practices. The overall summary of the practices showed that percentage of right versus wrong answers was 46:54. Among the colleges four scored above 50% and the deemed university was not one among them. The Computer science, Information Technology, Bio-technology and Chemical engineering departments scored the highest (57%).

2. Concurrence of Sample Opinions

The data was further subjected Kruskal Wallis H Test to evaluate whether the colleges and departments concurred in their opinions on the awareness of the strategies, concepts and practices. Table 1 presents the results of the test.

Table 1 Concurrence on the awareness of CRM college-wise

Statistics/Colleges	Strategies	Concepts	Practices
Chi-Square	20.717	8.890	5.570
df	9	9	9
Asymp. Sig.	.014	.448	.782

Table 2 Concurrence on the awareness of CRM dept.-wise

Departments	Strategies	Concepts	Practice
Chi-Square	17.796	16.413	11.166
df	12	12	12
Asymp. Sig.	.122	.173	.515

Since Table 1 shows that the p value is small in case of strategies, the level of knowledge on strategies does differ according to colleges. However, the p value is large on concepts and practices. The results can be stated as: There is significant difference in the awareness of educators on CRM strategies and no significant difference in their awareness of CRM concepts and practices. A similar test showed the results presented in Table 2.

Since Table 2 shows that the p value is large on all the three, i.e., strategies, concepts and practices. The result of finding is: There is no significant difference in the awareness of the educators regarding CRM strategies, concepts and practices.

3. Relevance of CRM to Higher Education

Having evaluated the awareness of the educators on CRM strategies, concepts and practices, their opinion was also sought on its relevance to higher educational Institutions. The result showed that on an average 81% of the educators were in favour of CRM implementation in higher educational institutions. The responses are presented in Table 3.

Table 3 CRM practicability for higher education

College*	No(%)	Yes (%)	May be (%)
SCEM	16.7	66.7	16.7
SIT	9.1	81.8	9.1
AIET	0	100.0	.0
MITE	20.0	80.0	.0
MVSIT	50.0	50.0	.0
NITK	20.0	80.0	.0
SJEC	26.7	70.0	3.3
CEC	.0	100.0	.0
SDIT	10.5	89.5	.0
PACE	12.5	87.5	.0
Total	16.6	80.6	2.9

*Full names of colleges are provided in appendix.

Table 4 Concurrence of staff regarding relevance of CRM

Test Statistics	College-wise			Department-wise		
	Value	df	Asymp. Sig. (2-sided)	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	36.863	27	.098	19.082	36	.991
Likelihood Ratio	24.633	27	.595	21.785	36	.970
Linear-by-Linear Association	3.138	1	.076			
N of Valid Cases	120			120		

The data was further subjected to Pearson's Chi-square test to know whether they concurred in their opinion on the relevance of CRM to higher education both colleges as well as department-wise. The results are presented in Table 4.

Table 3 shows that p value is large in both the cases. Thus the findings are that there is no significant difference in the opinions of the educators of engineering colleges of Dakshina Kannada regarding relevance of CRM to higher education.

tion both faculty-wise and college-wise.

VIII. Findings

The data described above brings out the following findings:

- The engineering college educators in Dakshina Kannada have fairly good knowledge on the strategies, poor knowledge on the sub-concepts and average knowledge on the practices of CRM. Among the departments, IT department has comparatively better knowledge of all the three. The computer science department has good knowledge of the strategies and practices. MBA department educators have good knowledge of the theory of CRM (strategies).
- Further the data reveals that there is no significant difference in their knowledge of the concepts and practices but there is a significant difference in their knowledge of strategies across colleges. However, course-wise, their knowledge is not significantly differing.
- A great majority of the educators are positive on the need for CRM implementation in higher educational institutions and they concur in their opinions college-wise as well as department-wise.

IX. Conclusion and Implications

Studies outlined in the sections 6 and 2 show that there is a need for CRM in higher education and that there is a positive impact of carefully implemented CRM on higher educational institutions. One of the important factors for a successful CRM implementation is the knowledge of the stakeholders across the organisation. Engineering college curriculum in Karnataka has not given the required attention to CRM so far as its importance has not yet been realized. In spite of this due to their orientation to similar software, this study reveals that they have fairly good knowledge of the strategies and practices. In addition the study also reveals that a great majority of the educators are in favour of CRM implementation in higher education. This assumes importance because willingness of stakeholders is another important criterion for success in CRM implementation.

As discussed above, the engineering field is (with special reference to computer science related courses) responsible in providing the society with the necessary expertise in software manufacture. This being the case, if the educators are provided with opportunities to learn the whole concept and

practice of CRM and apply it to their own institution by producing, or at least be involved with its maintenance once it is implemented, there is likely to be a positive impact on relationship management in their institutions. Presently Engineering colleges in India are facing a tough competition in filling up the seats in various courses of study. An educator-involved CRM implementation can be a key to solve this problem.

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Appendix Names of colleges

1. Sahyadri College of Engineering and Management (SCEM)
2. Srinivas Institute of Technology (SIT)
3. Alva's Institute of Engineering & Technology (AIET)
4. Mangalore Institute of Technology & Engineering (MITE)
5. Dr. M.V. Shetty Institute of Technology (MVSIT)
6. National Institute of Technology, Karnataka (NITK)
7. St. Joseph's Engineering College (SJEC)
8. Canara Engineering College (CEC)
9. Shree Devi Institute of Technology (SDIT)
10. P.A. College Engineering (PACE)