

A Critical Analysis of the Impact of CRM on Higher Education in Mauritius

Randhir Roopchand Lecturer

Aberystwyth University (Mauritius Branch Campus), Quartier Militaire, Mauritius

Email: rar11@aber.ac.uk

Abstract—This research paper seeks to understand the impact of CRM on Higher Education in Mauritius. Mauritius has the ambition of becoming an educational hub and the need for improving relationships with students has become quintessential. The methodology of the research is based on a critical review of existing literature and also based on a survey carried out with students in Public Universities in Mauritius. The results are conclusive that CRM has an impact on loyalty.

Index Terms—customer relationship management, higher education and mauritius

I. INTRODUCTION

Customer Relationship Management is about creating, building and enhancing long term relationships with customers with a view to increase profitability [1]. Customer Relationship Management may be defined as a strategy to select and manage the most valuable relationships. CRM has evolved over almost three decades already [2].

CRM has traditionally been applied by profit making firms with a view to increase profitability. However, CRM is also being applied by non-profit making firms and NGOs due to the possibility of applying the principles with a view to increase customer retention and customer satisfaction. The major contribution of the present research would be to apply CRM in a Higher Education environment. The literature review on Higher Education shows tremendous potential of improving student satisfaction through a structured approach of creating, developing and enhancing relationships with students. The innovation of the present research would be to identify the main variables that will form part of the CRM framework in Higher Education. Mauritius has a high enrolment at the tertiary level (42%). It seeks to achieve an enrolment rate of 70% by the year 2015. There are now four public Universities in Mauritius[3]with an overall population of about 30,000 students which is expected to increase constantly. The student population has increased in all the Public Universities. University of Mauritius itself has a student population of 13,000 students both at Full-Time and Part-Time. UTM has a student population of about 6000 trainees. The other two Universities are quite new namely the Open University and the Université des Mascareignes.

With such a massive growth there is a general debate at the national level about the quality of education being delivered [3]. In addition, students are bewildered by the vast array of courses being offered. Students are also lost during the whole student lifecycle. Customer Relationship Management has always been applied in the manufacturing/retail sectors. However, with the growing importance of the services sector in the Mauritian economy; an effective study of the possibility of implementing CRM in public sector should be considered.

II. LITERATURE REVIEW

A. Understanding CRM

Customer Relationship Management (CRM) is a leading new concept to business which has already become established in the literature [4]. CRM refers to all business activities directed towards initiating, establishing and developing successful long term relational exchanges [5]. A restricted view of Customer Relationship Management would be database marketing focusing on how promotional marketing is linked to database management tools. "CRM has been an IT enabled business strategy, the outcomes of which optimize profitability, revenue and customer satisfaction by organizing around customer segments fostering customer-satisfying behavior and implementing a customer-centric process" [6].

CRM is a comprehensive approach for creating, maintaining and expanding customer relationship. It provides seamless co-ordination between customer service, marketing, information technology and other customer related functions. It integrates people, process and technology to maximize relationships with all the customers.

B. Costs and Benefits of Customer Relationship Management

CRM applications have the ability to deliver repositories of customer data at a much smaller cost than old network technologies [7]. Throughout an organization, CRM systems can accumulate, store, maintain, and distribute customer knowledge. Peppard(2000) noted that effective management of information has a very important role to play in CRM because it can be used to for product tailoring, service innovation; consolidate views of customers, and for calculating customer lifetime value [8].

CRM systems assists companies evaluate customer loyalty and profitability based on repeat purchases, the amount spent, and longevity. Bull added CRM makes it practicable for companies to find unprofitable customers that other companies have abandoned. This position is supported by Galbreth and Rogersthat CRM helps a business organization to fully understand which customers are worthwhile to acquire, which to keep, which have untapped potential, which are strategic, which are important, profitable and which should be abandoned [9]. Customer Relationship Management an increase the true economic worth of business by improving the total lifetime value of the customer, adding that successful CRM strategies encourage customers to buy more products, stay loyal for longer periods and communicate effectively with a company [9]. CRM can also ensure customer satisfaction through allocation, scheduling and dispatching the right people, with the right parts, at the right time [10].

According to [11], companies can gain many benefits from CRM implementation. He states that the benefits are commonly found in one of these areas:

- i) Lower cost of recruiting Customers
- ii) No need to acquire so many customers to preserve a steady volume of business
- iii) Reduced cost of sales
- iv) Higher Customer Profitability
- v) Increased Customer retention & Loyalty
- vi) Evaluation of customers Profitability

Curry and Kkolou (2004) refer to the major benefits and reasons for adoption of CRM which include: customers from the competition will come prefer the organization; a simplified, customer – focused internal organization will simplify the infrastructure, shrinking the work flow and eliminating non-productive information flow; and profits will increase from satisfied customers which will lead to more compact & focused company [12]. Like any other new function, CRM too has its own drawbacks and challenges. Any organization that seeks to implement CRM may focus on value creation and on a continuous stream of profits. They will give up their myopic fix that CRM is the fixed responsibility of marketing or IT department. The firms will realize that in order for CRM to contribute to corporate renaissance, the CRM responsibility must rise to the level of CEO. CRM will be more strategy driven, and thus be able to concentrate on what customer expects from relationships. The ‘final take’ for the CEOs will be that CRM is and can be a vehicle for cultural integration in the organization. In short, a true CRM encourages a relationship view of the world that goes beyond the customers, includes multi – members and facilitates corporate renaissance [13].

C. Background to CRM and Higher Education

Kotler and Fox [14] argued that over the decades, the vocabulary of marketing, particularly marketing research, market segmentation and strategic marketing planning, has become widely used in the realm of higher education. This has even progressed to the point that in recent years, the trends towards establishing *market-oriented or*

customer-oriented strategies have been increased among those universities willing to focus on satisfying the needs and preferences of their target markets/students to enhance their competitive positions. Most educational institutions, as Kotler stated, have specific offices regarding marketing activities such as admissions, alumni or international offices and they even may employ some advertising and public relations efforts. However, while it is true that they are doing some marketing activities, it does not mean that they are necessarily market-oriented (Kotler & Fox, 1995) [14].

Scott (2000) believes that universities historically used to be segregated institutions with a specialized vocation [15]. Scott addressed globalization as the most important challenge faced by universities in their history which has brought a fundamental shift in the organizational character of modern universities. This shift has been metaphorically addressed by [16] as a transition from “domesticated environment” before 1990s to a “wild environment” after this time [17]. Meanwhile, *globalization* has grown impacts on higher education just like on any other sectors. According to [18], higher education has always been more internationally open to globalization than other sectors since it is the immersion in knowledge. The elements of globalization in higher education are widespread and multifaceted: it has been estimated that more than 1.6 million students study outside of their home countries, with more than 547,000 studying in the USA [19]. The issues and implications of the global marketisation of higher education and privatization have been discussed in the context of a number of key concerns [20]; problems of increasing competition between institutions, nationally and internationally, funding issues and widening participation or social segmentation [21]).

As [22] explained students are becoming more conscious of their customer rights and of gaps between their expectations of service delivery and the reality of that service. For example, in 2003, Darlaston-Jones et al. noted that the Australian universities have undergone a major transition in the past decade as they have moved from public to a greater emphasis on private funding, and re-invested themselves as business enterprises [22]. Furthermore, students are viewing themselves as consumers and are demanding value for money in their education.

Higher education in Mauritius has a serious quality problem [23]. In current competitive academic environment students have many options available to them. Therefore it is important to study factors that enable education institutions to attract and retain students. Higher education institutions which want to gain competitive edge in future may need to begin searching for effective and creative ways to attract, retain and foster stronger relationship with students. Therefore, it is necessary to invest in CRM for improvement. Besides the growing trends of globalization, *informationization*—the development and expansion of information technology—resulted from the current information age, has created a highly competitive and global environment for

universities. A consequence of this phenomenon is the increasing amount of free and on-the spot information about programs description, college amenities and schools' ranking available to potential students which have made them to be choosy about their studies [24]. Hence, as the result of the increasing globalization and informationization and some other factors including population demographics, work force requirements and new methods of delivering education, it is of little surprise if universities' managers and policy makers have started to think of a strategic planning in order to develop and maintain a smart balance between the institutions' capabilities and objectives and its changing external environment. As a part of this strategic planning, *marketing policy* of a university can be considered as an important conveyor of the university's missions to the society by attracting talented and qualified students from all around the world.

From the wave of globalization, there was the need for Universities to be customer centric. Achieving students' satisfaction will take such institutions to the point that a long-standing relationship can be established in which, both sides, students and universities, can take advantages from it. According to [25], "relationships take on the character of companions for life", given that life-long learning approach in the current world has made students to not only studying at universities once, but also to have recourse to these institutions again and again over time[25]. To underline the importance of relationship in higher education, Pausits has also stated that higher education institutions should no longer hold the attitude of being "ivory towers" and have to transform into "relationship-based organizations."

D. Application of CRM in Higher Education

CRM applications need adaptation to the characteristics of the institutions[26]. In response to these changes, the value, effectiveness and potential benefits of using marketing theories and concepts, which have been effective in the business world, are now being applied by many universities: with a view to gaining a competitive edge, and gaining a larger share of the international market. According to [25], nowadays, universities

employ CRM to manage relationships with their students and alumni. He supports his idea by giving an example that, if a student enjoys his or her experiences at a university, he or she might recommend it to his/her personal networks afterwards.

A recent study (2016) by the American Association Registrars and Admissions Officers(AACRAO) was conducted on the application of CRM. The survey was conducted with 603 admissions and enrollment management officers. From the survey, it was observed that 64% observed at least one means of CRM in their institution. Another interesting finding is that 42% of those institutions who do not have one are considering one. Further findings establish that few institutions are using CRM to provide lifecycle management support. A majority of users (59%) indicated that their institution has been "moderately successful" in the overall use of the CRM.

III. METHODOLOGY

A survey has been undertaken with different students in various Public Universities in Mauritius. A sample of 101 students was taken for this study. This survey will seek to understand the importance of relationship building in a Higher Education Environment. Statistical tests using SPSS has been used for analyzing the implications of CRM. Some tests that have been undertaken are the Chi Square Tests, Correlation between CRM and Satisfaction and Loyalty, cross-tabulations as well calculating a Student Index amongst others.

IV. RESULTS

From the Table I, we find that there is correlation between whether the University has a formal system of CRM and Student loyalty. There is a negative correlation between the two with P Correlation coefficient of -.219. The P value is .028 which is less than 5% and therefore we reject the Null hypothesis that CRM has no impact on Student Loyalty in a University system and accept the alternative Hypothesis.

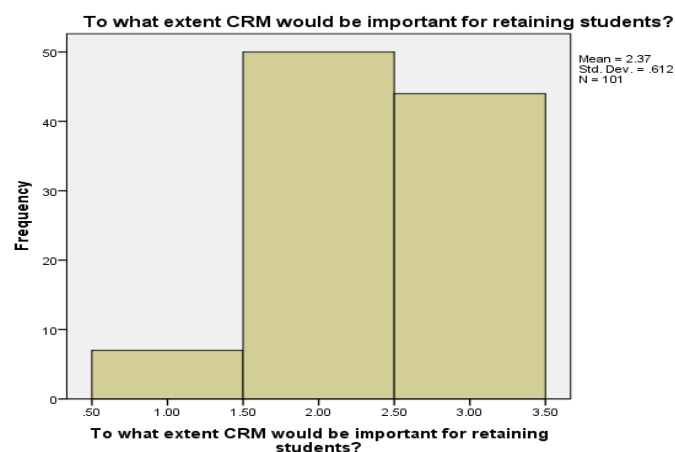


Figure 1. CRM and student retention in higher education

TABLE I. CORRELATION BETWEEN DIFFERENT CRM VARIABLES

		Correlations		
		Does your institution have a formal CRM?	To what extent do you think that CRM affects student loyalty?	Do you think that CRM affects student Loyalty?
Does your institution have a formal CRM?	Pearson Correlation	1	-.219*	.061
	Sig. (2-tailed)		.028	.547
	N	101	101	101
To what extent do you think that CRM affects student loyalty?	Pearson Correlation	-.219*	1	-.047
	Sig. (2-tailed)	.028		.640
	N	101	101	101
Do you think that CRM affects student Loyalty?	Pearson Correlation	.061	-.047	1
	Sig. (2-tailed)	.547	.640	
	N	101	101	101

*. Correlation is significant at the 0.05 level (2-tailed).

TABLE II. IDENTIFY SOME FAILURES YOU ARE FACING AS STUDENTS?* DO YOU THINK THAT CRM IS IMPORTANT IN HE? CROSSTABULATION

Count				
		Do you think that CRM is important in HE?		Total
		Yes	No	
Identify some failures you are facing as students?	Lack of effective infn on courses	9	4	13
	Lack of administrative support	33	8	41
	Lack of integration between depts.	17	0	17
	Lack of communication	14	2	16
	Lack of follow up on courses	9	0	9
	Weak Employees Culture	4	1	5
Total		86	15	101

TABLE III. DOES YOUR INSTITUTION HAVE A FORMAL CRM? * TO WHAT EXTENT DO YOU THINK THAT CRM AFFECTS STUDENT LOYALTY? CROSSTABULATION

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.154 ^a	2	.046
Likelihood Ratio	7.284	2	.026
Linear-by-Linear Association	4.784	1	.029
N of Valid Cases	101		
a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.75.			
Symmetric Measures			
	Value	Approx. Sig.	
Nominal by Nominal	Phi	.247	.046
	Cramer's V	.247	.046
N of Valid Cases	101		

Fig. 1 shows that most of the students claimed that CRM is quite important followed by Very Important. Only a few students were of the view that CRM is less important as a means to retain existing students. This is exactly in line with the existing literature which shows growing importance of CRM in Higher Education due to globalization and increasing competition (Marginson and Wende, 2006).

The Table II above summarises some of the failures identified in a Higher Education context in Mauritius. We can find that most students complain of lack of administrative support as a major failure in the Higher education system followed by lack of integration between departments. This contradicts Tinto's model (1992) which explains that student characteristics are the major reason for student dropout rates.

The hypothesis to be tested is that there is no relationship between having a formal CRM and student loyalty in a Higher Education setting. Both data used were categorical in nature and therefore appropriate for the analysis. The P value is less than 5% and therefore we reject the Null Hypothesis and accept the alternative one. However, the Phi and Cramer's V value show a weak relationship between the two variables.

Table III above shows the Chi Square Test values between having a formal CRM and whether students believe that CRM affects student loyalty. The Chi square test gives a P value of 0.046 which means that it is less than 5%. Therefore, we reject the null hypothesis that CRM does not have any effect on student loyalty. Therefore the alternate hypothesis is accepted. However, to know the degree of association we need to look at the Phi and Cramer's V value. In the present case, the Phi and Cramer's V is at 0.247 consequently a very poor association identified. Literature review shows that there is a positive association however the poor association needs to be analysed further through some qualitative studies and interviews.

REFERENCES

- [1] C. Gronroos, "The relationship marketing process: Communication, interaction, dialogue, value," *Journal of Business and Industrial Marketing*, vol. 19, no. 2, pp. 99-113, 2000.
- [2] TEC Report, The Quality Audit of Higher Education Institutions, MOE, 2015.
- [3] S. L. Szeinbach, J. H. Barnes, and D. D. Garner, "Use of Pharmaceutical manufacturer's value added services to build customer loyalty," *Journal of Business Research*, vol. 40, no. 3, pp. 229-236, 1997.
- [4] W. Reinatz and V. Kumar, "The impact of customer relationship characteristics on profitable lifetime duration," *Journal of Personal Selling and Sales Management*, 2003.
- [5] GartnerGroup. (2008). [Online]. Available: <http://www.gartner.com>
- [6] J. Chen and K. Popovich, "Understanding customer relationship management (CRM): People, process and technology," *Business Process Management Journal*, vol. 9, no. 5, pp. 672-688, 2003.
- [7] D. Peppers, M. Rogers, and R. Dorf, "Is your company ready for one-to-one marketing," *Harvard Business Review*, pp. 151-160, Jan.-Feb. 1999.
- [8] J. Galbreath and T. Rogers, "Customer relationship leadership: A leadership and motivation model for the twenty - first century business," *The TQM Magazine*, vol. 11, no. 3, pp. 161-171, 1999.
- [9] D. Chou, B. Lin, and Y. Xu, "Adopting customer relationship management technology," *Journal of Industrial Management and Data Systems*, vol. 102, pp. 442-452, 2002.
- [10] Swift, *Accelerating Customer Relationships*, NJ, Prentice Hall, 2001.
- [11] A. Curry and E. Kkolou, "Evaluating CRM to contribute to TQM improvement - a cross-case comparison," *The TQM Magazine*, vol. 16, no. 5, pp. 314-324, 2004.
- [12] B. Nguyen and D. S. Mutum, "A review of customer relationship management: successes, advances, pitfalls and futures," *Business Process Management Journal*, vol. 18, no. 3, pp. 400-419, 2012.
- [13] P. Kotler and K. Fox, *Strategic Marketing for Educational Institutions*, 2nd, New Jersey: Prentice Hall, 1995.
- [14] P. Scott, "Globalisation and higher education: Challenges for the 21st century," *Journal of studies in International Education*, vol. 4, no. 1, pp. 3-10, 2000.
- [15] Carlson, Customer Relationship Management Practices, UK, 1975.
- [16] P. Maggie, R. Glatter, and C. Wise, "Strategic leadership challenges," in *Strategic Leadership and Educational Improvement*, P. Maggie, R. Glatter, and C. Wise, Eds., Leading and Managing for Effective Education, London: Paul Chapman/Sage, 2003, pp. 1-16.
- [17] S. Marginson and M. Wende, "Globalisation and higher education," OECD Report, 2006.
- [18] A. Arimoto, "Market and higher education in Japan," *Higher Education Policy*, vol. 10, no. 3-4, pp. 199-210, 1997.
- [19] T. Conway, S. Mackay, and D. Yorke, "Strategic planning in higher education: Who are the customers?" *The International Journal of Educational Management*, vol. 8, no. 6, pp. 29-36, 1994.
- [20] Darlastan and Jones, *et al.*, "Perceptions of service quality in higher education," A Case study of Colombian University, 2003.
- [21] L'Express, Press Article related to Problems in Higher Education in Mauritius, 2015.
- [22] M. A. King, "A strategic assessment of the higher education industry: Applying the porter's five forces for industry analysis," presented at the Southeastern Decision Sciences Institute Annual Conference, Pamplin College of Business, Virginia Polytechnic and State University, 2008.
- [23] A. Pausits and A. Pellert, *Higher Education Management and Development in Central, Southern and Eastern Europe*, Munster: Waxmann, 2007.
- [24] P. Raman, C. Wittmann, and N. Rauseo, "Leveraging CRM for sales: the role of organizational capabilities in successful CRM implementation," *Journal of Personal Selling and Sales Management*, vol. 26, no. 1, pp. 39-53, 2006.
- [25] F. Buttle, *Customer Relationship Management: Concepts and Technologies*, 2nd, Oxford: Butterworth-Heinemann, 2009.
- [26] P. Raman, C. M. Wittmann, and N. A. Rauseo, "Leveraging CRM for sales: The role of organizational capabilities in successful CRM implementation," *Journal of Personal Selling and Sales Management*, vol. 26, no. 1, p. 3953, 2006.



Randhir Roopchand is currently Lecturer at Aberystwyth University (Mauritius Branch Campus). He has previously worked as Lecturer at Université des Mascareignes and has served as Head of Department for three years. He has also worked as Revenue Analyst at Air Mauritius. He has received several prestigious awards.