Electronic Customer Relationship Management Usability Model: Improving the Usability of eCRM Systems in Jordan

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Abstract

Electronic Customer Relationship Management systems are considered very important for business to compete in this vital environment. However, one of the main problems that faces organizations is how to design and develop a usable applications. This paper suggests a usability model to help organization to employ high usable eCRM systems. *Keywords: eCRM, Usability, Model, Jordan*

1. Introduction

The area of study is relatively new in Jordan. It undergoing significant change as new technologies are beginning to use in different business application. Customers are interacting with businesses across new information channels that use Internet and related ICT applications. Significant activity is being pushed to interactive, real-time digital information channels, providing businesses with unique potential for observing and measuring customers in new ways.

The way businesses have been traditionally organized, along functional and product lines, may be insufficient to take full advantage of the apparent and latent opportunities in measuring customer satisfaction. Many companies are looking to shift the central focus of corporate activity away from products and move it to customers or at least to learn new ways of managing customer-facing activities. To allow this change, businesses will need to build new and more strong performance systems, which replace or stand alongside existing product oriented systems.

Designing and managing these performance systems and the CRM technologies around them requires new combinations of skills and roles, unfortunately, many companies have not planned. Change begins with knowing. In order to successfully build out these new customer-oriented capabilities, companies will need to build out new ways of knowing customers and what make them satisfy.

Customer relationship management (CRM) is a complete business and marketing strategy that combines technology, process, and other business activities around the customer [1]. It is defined in terms of the retention of customers and the resulting profitability [2]. Fully implemented CRM is supposed to lead to bottom-line benefits for the organization [1], [3], [4]. According different websites, profits increase by 25-80 % when customer retention rates increase by five points. The Internet provided a background to deliver CRM applications on the Web or what can be called electronic CRM (eCRM).

2. Customer Relationship Management

Customer relationship management (CRM) is considered as one of the fastest growing management approaches being adopted across many organizations. Ref [5] defines CRM as "A management approach that enables organizations to identify, attract and increase retention of profitable customers, by managing relationships with them". CRM developed mainly from relationship marketing and the increased importance of improving customer retention through the management of customer relationships [6]. Relationship marketing means that the retention of the customer increase the profitability of organizations, this is because it is more efficient to maintain an existing relationship with a current customer than create a new one [7], [8].

Customer Relationship Management (CRM) becomes an extremely important strategy in very competitive markets; it can be seen as and efforts performed in order to manage interactions with customers through combining technologies and business processes which look for understanding company's customers [9]. Organizations become more and more aware of the different potential advantages which are provided by CRM. Ref [10] argue that increasing customer retention and loyalty is one of the main advantages of CRM. Moreover, another benefit is to increase customer profitability as well as creation value for the customer.

Ref [11] suggests that the most important issues in CRM activities are to understand customers' profitability and retain profitable When assessing customers. customer profitability, marketers are usually reminded of the 80/20 rule, this rule states that 80% of the profits are produced by top 20% of profitable customers and 80% of the costs are produced by top 20% of unprofitable customers [12]. To reach the full profit of customers, many organizations already attempt to measure as well as to use customer value in their management activities [13]; thus, many companies should assess their customers' value and build plans to keep profitable customers.

Relationship Management Customer is basically defined as a technology solution that extends sales automation tools and databases to link marketing and sales in order to improve targeting efforts. Other companies believe that CRM is a tool developed for one-to-one customer communications, call centers or marketing departments [14]. However, CRM is only technology applications for not marketing, sales and service, but also, when successfully implemented, a "cross-functional, customer-driven, technology-integrated business process management strategy" which increases relationships with customers and covers the whole organization [15].

Moreover, CRM applications connects front office operations such as sales, marketing and customer service with back office operations such as financial, operations, and logistics functions with the company's customer "touch points" [15]. A company's touch points may include e-mail, Internet, sales, direct mail, telemarketing operations, call centers, advertising, fax, pagers, stores...etc. Usually, these points are managed and controlled by other information systems. CRM's role is to mix touch points around a common view of the customer [17].

Usually but not always, CRM systems include contact management, call centre, data warehousing, and workflow and business process management in order to retain existing customers and developing new customers. Contact centers have been playing a major role within the CRM system [18]. Ref [19] states that the European customer support and service market is largely focused on call centers especially in the UK.

Most organizations use CRM systems in order to develop and improve customer facing processes. However, a small number of organizations are making optimal use of their customers' database; this is because they are failing to update the information collated about their customers. In addition, few reports propose that CRM systems fail to have the transformational impact widely promised by the software industry and expected by the business community.

3. Electronic Customer Relationship Management

Electronic Customer Relationship Management does not basically differ from CRM [20]. Development in the field of information and communication technology has increase the scope of CRM implementation in business Organizations, which leads to the rising of eCRM concept. By integrate customer-related processes through the internet, eCRM helps improve customer acquisition, customer development and customer retention.

E-mail and automated response considered as one of the important eCRM tools. E-mail being the dominant way of communication between the company and the customer, it is an important part for maintaining customer relationships. Instant feedback to customers is an importance consideration. Customers expect feedback response to be quick. Automating of e-mail reply based on key words and common queries in one way of speeding up the company's feedback response [21].

Web chat and electronic bulletin board are another tools that can be used to improve customer relationships. Web chats and electronic bulletin boards enable the customer to receive prompt feedback from service personnel and other customers [20]. Another famous tool is Order taking. It gives the customer the ability to see where the status on orders. By keeping the customer monitoring at all time of what stage the order is in, customer satisfaction is maximized [20].

Electronic CRM can create value for business organizations in different ways [22]. eCRM reduces costs relating to contacting customers as well as it transfers some responsibility to the customer, which reduces administrative and operational costs for the business, therefore adding value to the business. Moreover, Integration eCRM applications with back office systems may improve workflow which leads to efficiency and cost saving for businesses. Another contribution of eCRM on business organizations is that it improves sales through customer profiling, automating campaign management, email marketing, etc. All of these lead to customer loyalty and ultimately customer lifetime value.

4. eCRM and Web Usability

The usability of any Website is assessed through the clarity, simplicity and consistency of a website design and if it allows users to perform their tasks easily [23]. Moreover, web usability is a quality attribute that assesses how easy user interfaces are to use [24].

It is obviously that more usable eCRM websites helps people easily accessing information available. Usability is still one of the main problems influencing the adoption and development of eCRM in General. Poor usability often prevents eCRM adoption and development. Furthermore, it affects the success or failure of eCRM website.

Ref [24] suggests a set of usability attributes for user interface design. Some of these attributes include visibility of system status, user control and freedom, consistency and standards, error prevention, flexibility, help users recognize, diagnose and recover from errors, and help.

5. Research Methodology

In order to conduct this study, two main questionnaires experiments were carried out. The first Questionnaire was targeted the management of eCRM systems in a set of Jordanian business organizations as they play a key role in the success of the system. The success of any eCRM project is measured by the degree of satisfaction found in its users. Therefore, the second questionnaire's participants were the end user who use the current eCRM systems in these business. From the results of these two experiments, the model was developed.

5.1 Research Problem

Recently, many industries started to apply a new strategies by building strong connection with customers in the market place not only by improving product quality but also by establishing relationships with customers, aiming to build satisfaction, loyalty and retention. Retention is a major challenge particularly in Internet-based services, as customers can easily switch from one service provider to another at low cost [25]. Maintaining effective customer service helps to build and maintain customers' relationships that are the key success in e-commerce [26].

In order to satisfy customer's needs, many companies need to set up web sites that provide quality information and services to customers. The rapid development of information and communication technologies during the 1990s and the 2000s has enabled companies to introduce web services and at present a move to more personalized web services based on behavioral patterns. Recently, many Jordanian companies have used the Internet as a new market channel to offer their customers a variety of services 24 hours a day. It is important that organizations provide customers with personalized web services to survive in the highly competitive market.

However, it is not yet clear to understand how to develop a usable eCRM applications for the business and how to implement these systems to increase the satisfaction of the customer in Jordan. From this problem, this research idea has arose as a very important topic to be discussed.

5.2 Research Objective

In spite of the numerous advantages of eCRM systems, there are many concerns and challenges relating to the acceptance of these systems among Jordanian organization. One of the most difficult decisions organizations' managers have to make in today's business market is how to invest effectively in technology that will actually be accepted and used to achieve their goals. The main study aimed to look at eCRM usability from different perspectives and try to develop a model that if implement, the usability of using eCRM systems increase. To develop successful eCRM systems, this research suggests the following objective: "To build up a usability model for eCRM systems to help Jordanian Organizations".

6. Usability Model

The eCRM usability model is an outline that will provide a guide on how to have a usable eCRM in Jordanian organizations. The suggested model consists of different elements. The first part of this model is the eCRM application manager and designer. End-user feedback is another suggested part for the developed model. Design process and System Testing are another two parts of the suggested model for improving the usability (Figure 1). When successfully applied, the eCRM can be more usable and achieve the main goal of its implementation.

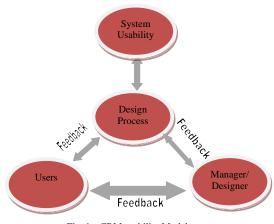


Fig. 1. eCRM usability Model

6.1 eCRM Applications Designers and Managers

eCRM designers and managers are considered as one of the critical in developing high usability eCRM applications. There is a clear relationship between the eCRM applications usability and good managers and designers. However, it is a challenging process to have good manages and designers that can make the eCRM application more usable.

eCRM applications managers in Jordan should have certain skills and capabilities because

they are able to affect negatively or positively the developed system. Therefore, they should have a good level of experience, knowledge and competence in order to participate in the eCRM application success. The designers, on the other hand, should also be considered to be experts in usability issues, and it does not matter whether they are customer relationship staff or third party as long as they have a good working knowledge of these processes. The designers might play the role of managers as long as they have some of their characteristics.

Furthermore, it is important to choose managers that having good communication skills. They should be able to be trusted and respected by other members and being able to hear staff's comments as well as feedback in order to encourage their future work on the applications. Moreover, management support and commitment are thought to be an influencing factor in the increasing of the usability of any eCRM applications. In addition, during the developing process, it is needed that a system manager and the designer to communicate effectively with each other about the information regarding building the application.

6.2 eCRM End Users Feedback

Errors in the developing of systems can occur mainly because designers usually do not notice their own work. Thus, it is important to collect feedback from the end users before applications is launched. The feedback of the user is one of the main factors in how successful a eCRM application is. It informs the team who is in charge for the system about how people feel about whilst using the system. Moreover, collecting feedback not only enables the improvement of usability, but also achieves eCRM goals by matching the system to the goals, and whether the design meets user requirements.

Success for the eCRM applications in Jordan can be achieved through obtaining and listening to any user feedback, which will lead to eCRM management having a better understanding of how users interact with the system.

Focusing on end users' feedbacks became very crucial. One of the problems of the online websites in Jordan is a failure to meet users" needs and expectations. Lack of involvement

of the end users in the state of design to be one of the major challenges of making a website usable. It is clear that involvement of the end users would be a helpful resource to enhance and increase usability of eCRM application.

Follow the proposed model and obtain users" feedback is considered as an essential base that can provide an accurate perspective of the way a prospective user sees the eCRM websites and applications in Jordan in terms of usability, in order to make any improving if necessary. Advantages of applying this model in term of end user feedback component include:

- Understanding the overall end user perspective on application usability.
- Being a simple way to ensure quality assurance.
- Developing designer and developer skills as that make them a better in the future
- Knowledge of any changing behavior and demands of users.
- Providing new and exciting ideas that will improve the usability

6.3 Design Process Requirements

There are many problems that end user in eCRM applications usually faced. Main problems are difficult navigation, search, lack of customization and appearance. These requirements that affect a website"s usability were identified through a literature review [27], [28], [8], [29], [30]. Paying more attention to such requirements helps attract users to the websites more frequently. Therefore, such issues can help increase the usability of eCRM applications and websites. Therefore, this model suggest to focus on these requirements in order to develop high usable eCRM applications and websites.

Navigation is the user's ability to move through the website and find their way easily in order to get services and information, with the ability of users to identify their location at any moment of the navigation. On the other hand, search is to determine if help is available for searching on the website, and allow users to search directly for the desired services or information on the website and how its The third accuracy. requirement is customization which is the ability to meet the direct needs and allow users to customize what they want or need without needing to ask for it to facilitate their visiting to the website in order to reach the needs and goals as fast as

they can. Finally, Appearance which is the visual appearance that helps to convince users that the website is the website they have been looking for. Good website appearance can also be used to help some people remember and learn; and may also help build trust.

6.4 System Testing

The creation of a functional and usable website is considered as the main goal of system developers. Testing systems before implementing them can make sure that it will meet their capabilities. If no problems occur during the testing phase, then the system has reached its goal. lack of testing is one of the main problems identified, the model has taken into account applying a test for the system before its launch. This ensures that the testing process has been performed and the goal of creating usable eCRM application is achieved.

Testing require users to conduct a series of standardized tasks in a typical environment. The first test results are handed over to the designers through the managers, who then make changes to the application based on the given feedbacks of the user. After that, the system is tested more and more waiting all problems to be solved. Implementing all comments and feedback in addition to solving occurred problems should be followed by one final phase of testing before starting up the system. It is thought that the more tests the better the result and evaluation should be continued once the eCRM application has been launched.

Applying the pre-implementation test in the study model will address one of the main problems, which is lack of testing. In addition, it is clear that applying system's test according to the proposed model will bring different advantages such as participants, actions can be observed and recorded and data can be analyzed and changed made accordingly. Moreover, it involves real users in the testing phase and they can be provided with real tasks to accomplish.

7. Summary and Conclusion

There are many advantages offered by eCRM applications and because of this, there is a need for usable eCRM systems in Jordan. The suggested usability model is an outline which will provide a guide on how to have usable eCRM systems in Jordan. The model is

developed to help people who are in charge of developing eCRM applications in Jordan to develop usable applications in order to let their customers to obtain information and services easily and, therefore, more profits.

The main problem that faces the Jordanian eCRM usability that there are still no clear guidelines about usability to be followed by Software organization that develop these applications. Also, there is lack of usability awareness among the management and developers participation at the system design phase.

The model focuses on different main integrated components which are website manager and designer, end-users, design process requirements and system testing (Figure 1). These components help in building up of usable systems in Jordan. The model is capable of achieving usable systems in Jordan. It is a major contributor in aiding awareness and solving challenges highlighted in the main objective of the study. Nevertheless, the testing and validation of the model through a real life experiment is left as a future work.

8. References

- [1] Anton, J. and Hoeck, M., *e-Business Customer* Service, The Anton Press, SantaMonica, CA. 2002
- [2] Menconi, P., CRM 101: building a great customer relationship management strategy, Customer Relationship Management, Montgomery Research, San Francisco, CA, pp. 31-3, 2000.
- [3] Rust, R. and Zahorik, A., Customer satisfaction, customer retention and market share, *Journal of Retailing*, Vol. 69, Summer, pp. 193-215, 1993.
- [4] Swift, R., Accelerating Customer Relationships Using CRM and Relationship Technologies, Prentice Hall, Englewood Cliffs, NJ, 2001.
- [5] Bradshaw, D. & Brash, C., Managing customer relationships in the e-business world: how to personalize computer relationships for increased profitability, *International Journal of Retail & Distribution Management*, Vol. 29 No. 12, pp. 520-30, 2001.
- [6] Light, B., A review of the issues associated with customer relationship management systems, Proceedings of the 9th European Conference on Information Systems, pp. 1232-41, 2001.
- [7] Payne, A. Christopher, M. Clark, M. & Peck, H., *Relationship Marketing for Competitive Advantage*, Butterworth Heinemann, Oxford, 1999.
- [8] Reichheld, F. F., Markey, R. G., and Hopton, C, Ecustomer loyalty – applying the traditional rules of business for online success, *European Business Journal*, 12(4), 173-179, 2000.
- [9] Kim, J., Suh, E., & Hwang, H., A model for evaluating the effectiveness of CRM using the

balanced scorecard, *Journal of Interactive Marketing*, 17(2), pp 5–19, 2003.

- [10] Jutla, D., Craig, J., & Bodorik, P., Enabling and measuring electronic customer relationship management readiness, Proceedings of the 34th annual Hawaii international conference on system sciences organizational systems and technologies track, pp. 1–10, 2001.
- [11] Hawkes, V. A., The heart of the matter: The challenge of customer lifetime value, CRM Forum Resources, 1–10, 2000.
- [12] Gloy, B. A., Akridge, J. T., & Preckel, P. V., Customer lifetime value: An application in the rural petroleum market, *Journal of Agribusiness*, 13(3), 335–347, 1997.
- [13] Rosset, S., Neumann, E., Eick, U., Vatnik, N., & Idan, Y., *Customer lifetime value modeling and its use for customer retention planning*, Proceedings of ACM SIGKDD international conference on knowledge discovery and data mining, pp. 332–340, 2002.
- [14] Pepper, D., Rogers, M., & Dorf, B., Is your company ready for one-to-one marketing, *Harvard Business Review*, 77(1), 151–160, 1999.
- [15] Goldenberg, B., What is CRM? What is an ecustomer? Why you need them now, in Proceedings of DCI Customer Relationship Management Conference, Boston, MA, 27-29 June, 2000.
- [16] Fickel, L., Know your customer, CIO Magazine, Vol. 12 No. 21, pp. 62-72, 1999.
- [17] Eckerson, W. & Watson, H., Harnessing customer information for strategic advantage: technical challenges and business solutions, Industry Study, the Data Warehousing Institute, Seattle, WA, p. 6, 2001.
- [18] Xu, m., & Walton, J., Gaining Customer Knowledge through Analytical CRM", *Industrial Management & Data Systems*, Vol. 105, No. 7, pp. 955-971, 2005.
- [19] Taylor, S.A. and Hunter, G., The impact of loyalty with e-CRM software and e-services, *International Journal of Service Industry Management*, vol. 13, no. 5, pp. 452-474, 2002.
- [20] Feinberg, R. A., Kadam, R., Kokama, L. and Kim, I., The state of electronic customer relationship management in retailing, *International Journal of Retail & Distribution Management*, Vol. 30, No. 10, pp 470-481, 2002.
- [21] Ab Hamid, N.R., E-CRM: are we there yet?, Journal of American Academy of Business, vol. 6, no. 1, pp. 51-57, 2005.
- [22] Adebanjo, D., Classifying and selecting e-CRM applications: an analysis-based proposal, *Management Decision*, vol. 41, no. 6, pp. 570-577, 2003.
- [23] Cappel, J., & Huang, Z., A usability analysis of company websites. *The Journal of Computer Information Systems*, 48 (1), 117-123, 2007.
- [24] Nielsen, J., *Designing Web Usability*, The Practice of Simplicity. New Riders Publishing, 2000.
- [25] Khalifa, M. and Liu, V., Determinant of satisfaction at different adoption stages, *Internet –based services Journal of the association for information systems* Vol.4, No. 5, PP. 206-232, 2003.
- [26] Sing, M., E-services and their role in B2C ecommerce, *Managing Service Quality*, Vol.12, No 6, p 434, 2002.
- [27] Banati, H., Bedi P. and Grover P.S., Evaluating Web Usability from the User's Perspective, *Journal of Computer Science* 2 (4): 314, 2006.
- [28] Cardello.J and Nielson.J., Customization Usability: 46 Design Guidelines to Improve Web-based Interface



and Product Customization, Nielsen Norman Group, Publisher: New Riders, 2010.

- [29] Teoh. K.K, Ong. T.S, Lim. P.W, Liong.R and Yap. C.Y., Explorations on Web Usability, *American Journal of Applied Sciences*, 6 (3): 424-429, ISSN 1546-9239, 2009.
- [30] Thorbjornsen, H., Supphellen, M., Nysveen, H., and Pedersen, P. E, Building Brand Relationships Online: A Comparison of Two Interactive Applications, *Journal of Interactive Marketing*, 16(3), 17-34, 2002.

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