Evaluating Smart App's Effectiveness

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Abstract

This paper studies how effective Smart's App has been to its customers. The "Smart App" is an application software designed to run on a mobile device which allows Smart customers to access features similar to those traditionally used in the access number system. The smart app provides the services most frequently used by customers and additional features that would better customer experience. This app was launched by the company as it aims to have an all-inclusive service in one app to avoid customers having to visit their showrooms for customer support; the app facilitates customer support. This study seeks to analyse how effective the Smart App has been for customers as well as recommendations to improve the app.

Keywords: Smart App, Access Number System, Management Information System, Information System (IS), Service Quality, User Quality, Use, Perceived Net Benefits.

Introduction

Management Information Systems is the key factor to facilitate and attain efficient decision making in an organization. Therefore, Information Systems are not simply about computers, smartphones, or any device in general that the system may be installed in but rather how businesses can make the best use of these devices to provide the information needed to achieve their organizational goals. In the same way individuals have needs and priorities, each organization has different goals and requirements, and the successful implementation of information systems

requires a thorough understanding of the business issue involved as well as the different technologies that are available.

Smart first released its Smart App in the year 2013, however, it was relatively new and the large numbers of smart customers were not comfortable using it. As years went by smart continued updating their app, improving its quality and made it user-friendly to gain users. Their motive was to decrease their customers going in to ask for information such as access codes. This app would enhance customer experience and improve customer support. The Evaluation of the effectiveness of Smart's Customers app is essential; this will result in a narrowed conclusion of customers' opinions on this particular app. In addition, it would not only help in improvements of the app but also identifying if smart has met or achieves its initial goal and strategy with the creation of the smart app.

Furthermore, it is known that smart customers are new to the smart app, although it has been around for five years. In addition, smart customers still prefer using the traditional way of obtaining information such as dialling the access numbers instead of using the app's information. This suggests that customers prefer confirmation on balances directly from customer service, or customer support via telephone calls rather than viewing their balances on the app due to misbelief. The paper proposes to evaluate specific areas to answer the unknowns of this research paper such as user satisfaction, functionality of the smart app, etc. Ultimately, the smart app has never been evaluated by an outside party other than its original creators being the Smart Ltd. Thus, the goal of the researchers is to evaluate the smart app and to suggest recommendations based on the results attained from surveys conducted by researchers.

Literature Review

In 1992, Delone and Mclean proposed that the dependent variable for Information System (IS) study is the IS success. Their study resulted in a widely recognized and used IS success model, in which the six dimensions introduced in their taxonomy, System Quality, Information Quality, Use, User Satisfaction, Individual Impact and Organizational Impact are all different but related dimensions of the Information System Success. In addition, based on the examination of literature relating to the IS success they reviewed the existing definitions of IS success and their corresponding measures and concluded that many success measures fall into the six major dimensions. As a result, they created a multidimensional measuring model (IS Success Model) with interdependencies between the different success dimensions (Delone and Mclean, 1992).

Delone and Mclean, proposed an updated IS Success Model based on contributions from many empirical studies which validated the original model and its interrelations and other studies that recommended improvements to their original model (Delone and Mclean, 2003). The original model was also modified to address some limitations. An important dimension of the IS success added in the updated model was the Service Quality since they considered it essential in information system support relating to e-commerce environment where customer services is important. In addition, the "impact" dimensions were grouped into a single category call net benefits.

Usability testing of software applications is a perfect way of identifying the success of Smart's app. However, it must be noted that there are applications that work elsewhere, for instance, desktop applications. Therefore, there are appropriate research methodologies that are used to evaluate the usability of Smart's app, which is a mobile application. Currently, there are many advanced wireless technology, simply to enhance wireless communication between people. There are many businesses that are developing applications to provide its users with universal access to

information (Dongsong, Zhang, & Adipat, B., 2005). The usability testing is an evaluation method used to measure how well users can use a specific software system. It is a third party assessment in which it has to be able to elicit feedback from users about whether they use an application without difficulty and how they like using the application, as well as to evaluate the levels of performance achieved by users (Dongsong, Zhang, & Adipat, B., 2005).

The usability of mobile applications is evolving rapidly, and is making information accessible at anytime and anywhere. However, there is also a challenge in usability testing of mobile applications such as its mobile context connectivity, small screen size, different display resolutions, limited processing capability and power, and data entry methods.

Looking at the usability of mobile application, it is imperative to understand its usability because it can help to provide important information for the improvement of the application itself. It is well known that highly usable devices have a greater return on investment, and that the application of user-centred design in the development of mobile applications is one important way to increase usability (Kortum, P., & Sorber, M, 2015). Therefore, the best way to measure the usability of the mobile apps can be done in either the laboratory or the field. In either cases, the usability testing protocols dictate that a set of tasks can be defined, with the user being observed performing the task while performance metrics are collected (Kortum, P., & Sorber, M, 2015). These usability performance metrics include effectiveness, efficiency, and satisfaction. For simple applications that have limited, specific functionality, defining the task can be relatively straightforward.

There can be external factors that can impact user's interaction with the app, both in the laboratory and the field (Kortum, P., & Sorber, M, 2015). These factors include the context of use

(distractions, interacting with people, and environment) and its connectivity (availability and speed).

According to Mobile Application Development: All Steps and Guidelines for Successful Creation of Mobile App: Case Study, the term Mobile Application Developments refers to the process of making application software for handled devices such as mobile phones and Personal Digital Assistants (Kishore, 2017). It further explores challenges for mobile application followed by various steps essential for the development of mobile app. Moreover, it proposes a solution which includes analysing the existing problem and solving it in a mobile-first way. It expounds on the features of existing apps and decisions to be taken based on the features provided and benefits that are acquired by using these features. It describes the design of the app, and explains the principle factor for a successful app.

The mobile apps industry: A case study, proposed how the industry has encouraged the widespread popularity of smartphones and other mobile devices have transformed electronic gaming, internet retailing, and social networking (Rakestraw, Eunni, Rangamoham, & Kasuganti, N.D). It also expounds on both Apple and Google accounts due to these being the most popular of the 21st century. Furthermore, this case study analyses the evolution of the smart phones; and the user's experience in regards to the functionality of personal computers on pocket-sized devices known today as smartphones. Moreover, it expresses the impact of mobile gaming, which refers to devices back then comparing it to devices in present times, including the price difference of such devices. It has become more affordable for individuals to purchase any smart phone now than it was in past years. This is due to the competition between companies so therefore, prices must be competitive also. In addition, this article proposes the impact on traditional websites; it is said that apps will eventually supplant standard internet websites in the way that DVRs have replaced

videotaping and cell phones replaced land line phones. Likewise; the consumer preferences in mobile apps.

Dimensions of Information Systems Success proposes a two-dimensional matrix for categorizing IS effectiveness measures (Seddon, Staples, Patnayakuni & Bowtell, 1999). The first dimension is the type of system studied; thereafter, is the stakeholder in whose interests the system in being evaluated. This paper analysis the Information System research framework, user satisfaction and effectiveness and Information System success. As a result, it indicates that there must be appropriate measures that should be combined in a study to assess effectiveness from different stakeholders' views. In addition, the second insight of this paper is that the two dimensions mentioned define the IS effectiveness matrix and it illustrates how subtle differences in stakeholder perspective can produce significantly different evaluations of systems.

Methodology of Study

The research used a quantitative method to gather the relevant information from the target population. The researchers used questionnaires to measure the effectiveness of the Smart App for their external users which are the customers that utilize the smart app. Questionnaires were distributed to respondents that were smart customers and used the smart app or had used it before, these users were randomly selected. In addition, the questionnaires were used to measure the overall effectiveness that the Smart App has had with its customers. A total of forty questionnaires were given to the smart customers who were using the smart app or had used the app before. After gathering the information from questionnaires the DeLone and McLean model will be used to evaluate the Smart App.

Approach

The researchers used two methods to distribute the questionnaires, the first was to hand deliver sixteen questionnaires at the University of Belize's main campus in Belmopan and also hand delivered seven questionnaires in Orange Walk, and this was to ensure that the questionnaires were filled out properly and returned in a timely manner. The other was to email respondents, a total of twenty were emailed and eleven questionnaires were returned properly filled and in time. It's important to note that the research does not focus on demographics or location of respondents but rather on evaluating the effectiveness of the app based on the information participants provided.

Participants

The participants selected to contribute in this research were smart customers who use the app or had some experience with the app. In addition, Smart has a wide customer base in Belize however, not all smart customers use the app therefore the participants selected were those who have used it or are currently using it.

Research Model

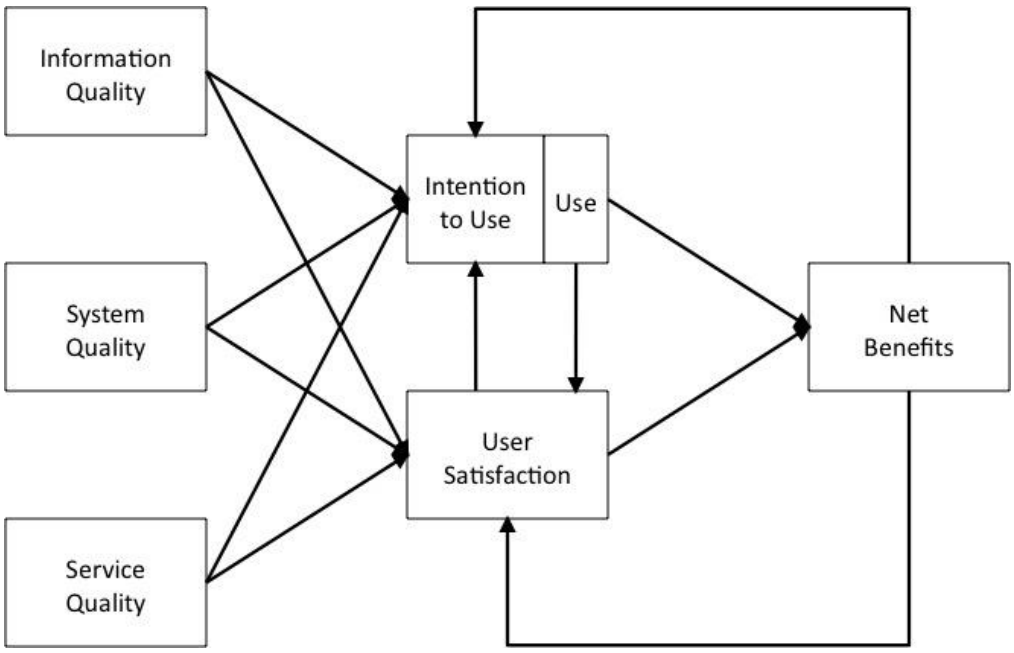

Figure 1: Delone and Mclean Information System Success Model

It is important for organizations to ensure that their investment in information systems are successful, meeting its need or opportunity and the organization's goals. Therefore, to measure information system success, there are six components in the Delone and Mclean IS Success Model that must be measured. Firstly, the information quality will focus on the relevance, understandability, accuracy, completeness, timeliness, and usability of the Smart app on users. Secondly, system quality will focus on the way how users use the Smart app, whether if it was easy or difficult to use. Thirdly, the system quality will focus on the quality of support that the users receive from the Smart app or its support personnel. For example: responsiveness, reliability, technical competence, and empathy of the personnel staff. Fourthly, the use and intention to use will focus on the way how the users utilize the capabilities of the Smart app. For example: its amount of use, frequency of use, extent of use, and purpose of use. Fifthly, the user satisfaction will focus on the level of satisfaction that users get form using the app. Sixth, and final, is the net benefit which will be focusing on the way how the Smart app is contributing to the success of individual users. For example, improved productivity, cost reductions, and improved decision making.

Data Analysis

The purpose of this research was to analyse the effectiveness of the Smart App in relation to customer use and services provided through the app. It is important to note that the basis of the research finding would shed light on whether the customers using the app or having prior experience with the app are satisfied with the service provided through the app and if it's effective in meeting all the customer needs. This research was developed from a quantitative method and

the sample size used for this research was 33 which consisted of smart customers who use the app or have used it before. Furthermore, the primary data used were questionnaires that were used to obtain data from customers using the app. The participants were selected using random sampling method where each researcher distributed questionnaires within their geographic location. The secondary data used for the research was past literature to support inferences.

Out of the 43 questionnaires that were distributed to smart customers using the app only 34 usable questionnaires were collected or emailed back which yielded a 79.07 percentage response rate.

Table 1: Characteristics of Respondents

Characteristics	Responses	Percentage
Gender		
Male	18	53%
Female	16	47%
Age		
< 25	11	32%
25-35	18	53%
36-45	3	9%
46-55	2	6%
> 55		
Education		
High School or Less	6	18%
Diploma	8	24%
Bachelor's	20	59%
Master's		

Figure Illustrating the Characteristics of Respondents

Below are bar charts depicting the results gathered from the questionnaires distributed to the respondents. The charts show the results from specific sections of the questionnaire that would

help in evaluating the effectiveness of the app among its users. The questions were based from service quality, user satisfaction, use and perceived net benefits.

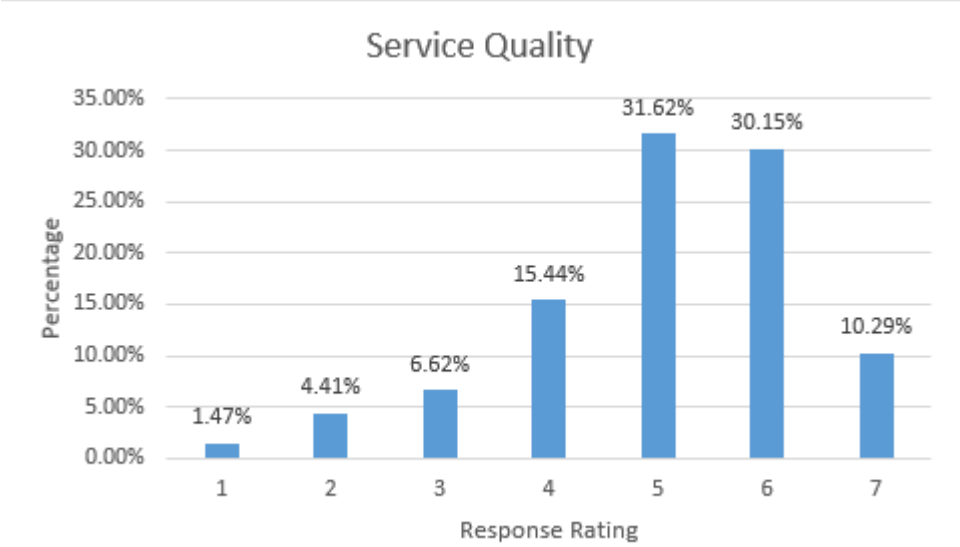

Chart illustrating the Service Quality in accordance to the rating

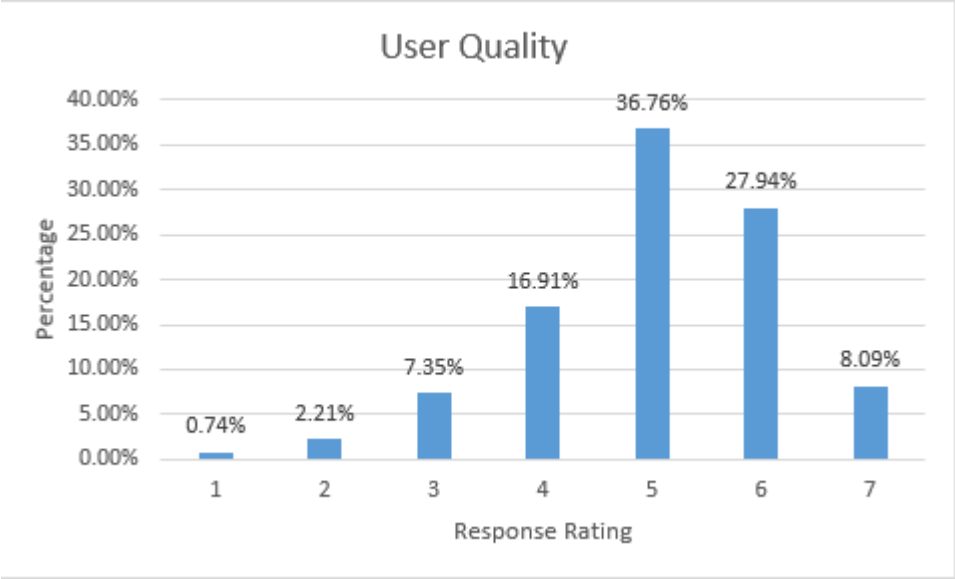

Chart illustrating the User Quality in accordance to the rating

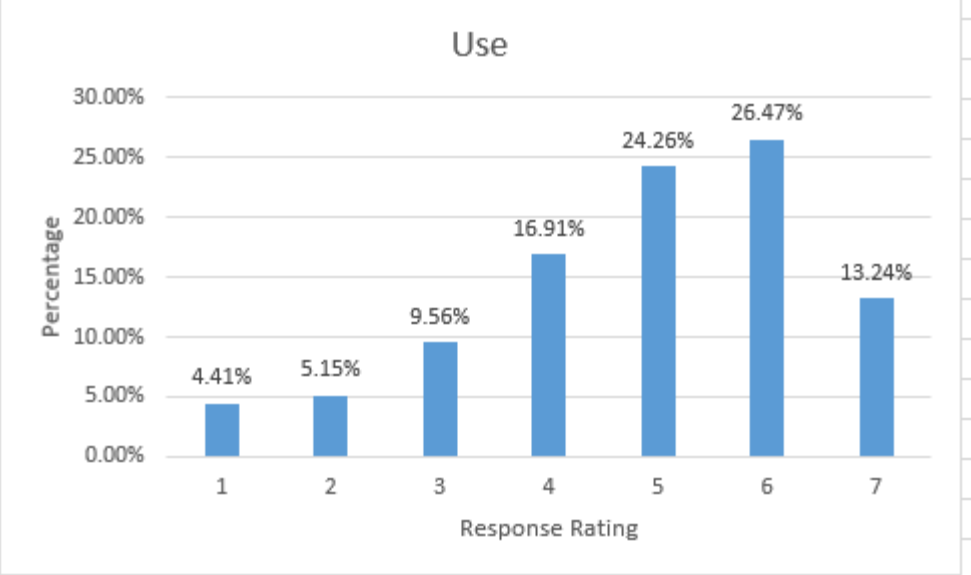

Chart indicating the Use in accordance to the rating

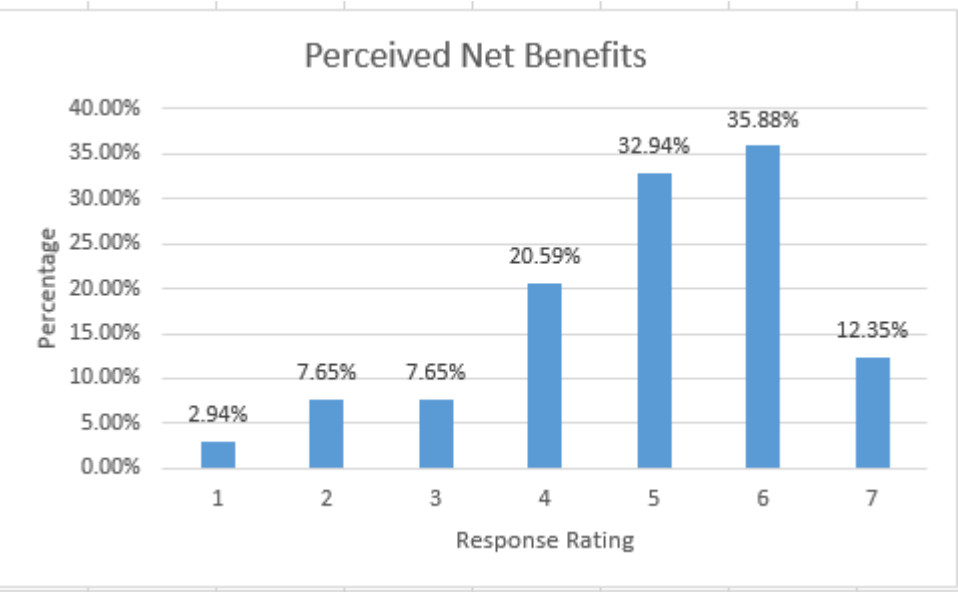

Chart indicating the Perceived Net Benefits in accordance to the rating

On the basis of these results, it shows that service quality, user quality, its use, and perceived net benefits are high, which means that the app is successful in meeting the needs of its users. Users show that the service quality that they receive from the app's support staff was almost

excellent. Likewise, its user quality and use show that its use is of high standard, which results in the net benefit that meets the needs of its users. All response ratings were high at 5 and 6, which is a good indication because it is close to 7, signifying that they strongly agree.

Moreover, it is important to mention that while distributing questionnaires to smart users it indicated that a lot of smart users have not installed the app as yet or have uninstalled the app because it was not meeting their needs. However, after several updates the smart app has become more user friendly to the smart customers. While analysing the customer's characteristics, the app has impacted the lives of younger individuals as compared to elders. Results illustrated that a total of fifteen percent of individuals are over 36 years of age have used this smart app. Therefore, this proves that younger customers are utilizing the smart app.

Conclusion

As technology evolves, so does the need to get things done faster. Everyone is looking for new ways to improve their way of life in a convenient yet efficient manner. The SMART App allows customers the ability to get customer services and access to other information without the need to go into a physical location. The data collected for this study were obtained through the use of questionnaires handed out to Smart customers who have utilized the information system at least once before. This research gathered data from the Belmopan City and Orange Walk Town regions of Belize to determine the information quality on smart's app, whereby the respondents agreed that application provides up to date and reliable information. Majority of the respondents have or are in the process of obtaining a bachelor's degree and are either less than 25 or are between the ages of 25 and 35. Since the participants contributing to this research can be classified as

millennial, the research can conclude on the fact that younger individuals are more inclined to trying new technology and are more open minded to learning its features. Additionally, a total of 72.06% customers were satisfied with the service offered through the app, since the participants in the research rated the app with a 5, 6 or 7. This then proves that Smart app is convenient for majority of its users.

Overall, this research can assure that the Smart App has proven to be beneficial to customers in that it is more convenient and user friendly. The rise of technology will only mean greater perks for all scopes of life. This research was successful since it allowed the researchers to get a better understanding of customer response towards the Smart App. Customers agreed that it is user friendly, offering vast benefits since the quality of service is high with the relevant information needed.

Recommendation

Given the fact that technology is rising, more customers are utilizing it to make their day to day activities easier. The use of the Smart App may be keeping up to the trend but there is room for improvement. One recommendation would be to make the app more user-friendly. Allowing customer to view options in a more clean view would definitely make it easier for older customers. Having options that are straight to the point would allow customers of all ages to want to utilize the app more often.

Another recommendation would be to have rapid customer service response on the app. There are situations when customers want to know valid information about their phones or Smart functions, therefore, customers would definitely appreciate have a smart chat section that has a

fast response rate. This would be beneficial because when someone wants to know information, they need to know it now. This would surely make customers want to access the app for their queries.

If Smart would offer added benefits to customers whom utilize the app then it would increase customer usage. This could come in the form of getting added data or bonus credit when you use the app to purchase. This would not have to be a large added promo but just enough to have customers wanting more. Customers like getting benefits; therefore, if you reward your customers for their loyalty to your company it would increase customer satisfaction and ultimately improve Smart Belize.

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