Evaluating the Success of MOD Information System at The Ramada Belize City

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Abstract

A considerable amount of research has been conducted on information system success models, meanwhile a few research has been carried out the evaluation of the MOD information system success with the organization. This study provides the empirical test of an adaptation of the DeLone and McLean's IS success model in the context of MOD information system. The data was collected by delivering questionnairs to 35 employees at the Ramada Princess Hotel that showed the MOD information system was successful in achieving the organization objectives. The model consists of six dimensions: information quality, system quality, service quality, use, user satisfaction, and perceived net benefit which proved that the research was successful. The findings provide several important implications for the information systems at Ramada. This paper concludes by discussing the limitations of the study, which should be addressed in future research.

Keyword: MOD information system; information system success model; perceived net benefit.

Introduction

Ramada is not only located around 60 countries across the globe but is also Belize City's largest hotel and entertainment center which is comprise of: A Vogue Bar & Lounge, A Sea view Restaurant, Club Calypso's Sea Food Restaurant & Bar, Cinemas, Marina, and meeting rooms. The Hotel has 160 rooms, divided into standard king/queen rooms, regular suites, studios suites, junior suites, and one presidential suite all with a magnificent view of the Caribbean Sea (Department, 2015, p. 9).

Ever since the world is digitally connected the use of information technology in Belize has been utilized to increase the economic growth. Over the past years we have seen the internet make the Belizean businesses more productive, increasing the efficiency of the Government service delivery, and improving the competitiveness in the domestic and international markets (Avery, 2017). However, the uses of information systems in these organizations have been utilized to meet the business objectives but not every organization in Belize uses information system to operate their business.

The purpose of this research paper is to show how the MOD (Manager on Duty) is utilized in the Ramada Princess Hotel in Belize City. This paper will show the knowledge of the information system and how effective its used at the organization. Information systems are a set of interrelated components that collects, process, store, and distribute information to support decision making and control in an organization (Laudon & Laudon, 2016, p. 48). Ramada uses a MOD information systems which is a Turkish information system used in various hotels worldwide (Mod Hotel Software, n.d.). The MOD information system is the major information system used at the Ramada in mostly all the departmentssuch as the: Front desk, Accounting, Finance, Sales, Housekeeping and Food and Beverage departments.

At this point, the use of the MOD information system should show the success or failure of the organization. The importance of this study is to expand the knowledge and the use of information systems in Belize and the benefits it brings to the organization. This research will investigate by evaluating the value added of the MOD information system and whether it's successful or not, as well as to create available data to which the organization can reference to improve its services to achieve the business missions and objectives. This will be done by using the DeLone and McLean model of information system success that will determine whether appropriate measures are being used for the organization success. Therefore, this research will gather information using quantitative research by gathering information from questionnaires designed to evaluate the Ramada information system.

This research paper will be organized as follows. First we will present a background of the MOD information system used at Ramada, followed by a review of the literature review. We will then focus on the methodology of the study. Followed by the data analysis and the results of the study, and finally the conclusion and recommendations.

Literature Review

The main purpose of this literature review is to provide comprehensive data and analyze the success of Hotel Information System, focusing on the MOD at the Ramada Princess Hotel in Belize. The 1992 and 2003 DeLone and McLean IS Success Model, has been the basis of previous successful studies and for the purpose of this research we are going to credit our discourse on some of those findings as well as others. According to Manjunatha, Srinivas, Rama chandra, Neetha et. al. (2016) it is imperative for hotels to use management information systems because hotel has taken on a much role in the market, so using manual system may lead to erroneous management. Therefore, using a computerized system is more productive.

In rescript to identify the factors that contribute to IS success in 1992, DeLone and Mclean published a paper in which they attempted to bring some cognizance and social organization of the measurement of the dependent variable in info system. According to them, the measurement of IS success or IS effectiveness is critical for understanding the value and efficacy of IS management actions and IS investments. They stated that the dependent variable in MIS research is a particularly important issue because that's what IS research wants to make a contribution to the world of practices, a well-defined outcome measure is essential. They argued that there was little good relevance to measure various independent or input variables such as the extent of user participation or the level of IS investments if the dependent or output variable such as IS Success or MIS effectiveness cannot be measured with a similar degree of accuracy (DeLone& McClean,1992). The research was based on theoretical and empirical IS research which was conducted by a number of different researchers in the 1970s and 1980s.

Bushalis and Law (2008) draws the conclusion that 20 years prior to 2008 technological communication had evolved, however the direction taken, made a path forward that will lead to even further global interaction to players around the world. In the Belize context, the Ramada Princess hotel is using MOD hotel software, which allows them to have 7 days a week twenty four hours a day professional services. It

affords, managers, staff and shareholders to share information from the front of the house as well as the back of the house.

In 1992, DeLone and Mclean proposed the scheme of classification and an interactive model as the frameworks for developing, using IS success which is now referred as the D&M IS Success Model. They reported there were six major categories or dimensions that are distinct but related of IS success, they are as follows:

- System Quality, which measures the information processing system itself.
- Information Quality measures the quality of the information system output.
- Information use, the consumption of the output.
- User Satisfaction, the IS user's response to the information system.
- Individual Impact, the effect of the information on the behavior of the user.
- Organization Impact, the effect of the IS on organizational performance.

This scheme classified that both authors tried to identify, categorize and analyze the IS success measure, which had been published in several journals between 1981 and 1988. Richard Mason in 1978 determined the use of terminology that was based on Claude Shannon and Weaver's Information Theory of 1949. Shannon developed an information theory based on mathematical theories based on signal transmissions with maximum telephone line. Later on,Weaver used Shannon's information theory for different kinds of communications, developing the theory related to human communication. In 1992, DeLone and McLean proposed the six different categories of IS success based on Mason's taxonomy.

Shannon and Mason (1978) asserted that the effect of information on its users can be measured at a technical level and an effectiveness level. The technical level relates to how accurately the symbols of communication be transmitted, and the effectiveness level is the concern on how well the message delivered the desired behavior to the receiver.

According to Mason (1978), there are five stages to the process of communication which are:

- The production of information.
- The product itself.
- The recipient of information.
- The influence it has on the recipient.
- The influence information has on the performance of the system.

In 1992, the taxonomy introduced a paper that provided a more comprehensive view of information system. It was more organized and more understandable with coherent IS researches that provided alternative explanations for the seemingly inconsistent findings in the past IS research results. Seddon (1997) agreed that DeLone and McLean's work makes several important contributions to the understanding of IS success. They stated that DeLone and McLean's work combines all previous research, it provides a scheme for the different measures of IS success, that have been proposed in the literature in six categories.

DeLone and McLean developed their original model and proposed an updated version in 2003. In the 2003, the version Service Quality dimension was added into the success model. The individual impact and organizational impact were combined into a single variable named "net benefit" accepting the suggestion of Seddon (1997). In 10 years, the updated IS Success model they later released provided more details and description about each one of the six dimensions of IS success. They claimed that service quality dimension added to the categories, referred to the overall support that the users of the system receive from their IT department or from their service provider or the organizational unit. The net benefits is the most important success because it capture the balance of a positive and negative impacts of the e-commerce on our customers, employees, suppliers, organizations, industries and even in our society.

Delone and Mclean suggested that the new variable that had been added updates the model service quality that is considered the most important success measure without including the information measurements that cannot be analyzed and understood (2004). The updated D&M IS success model validate associations among success dimension in a process sense. For example, in one instance a high-quality system will be associated with more user satisfaction, and positive net benefits; the proposed associations would then all be positive. However, in another circumstance the more use of a poor quality

system would be linked with more dissatisfaction and negative net benefits. DeLone and McLean published their first IS Success model more than 20 years ago. More studies are being conducted to evaluate the success of IS in different context. All these new studies theory proves that DeLone& McLean IS Success Model provide an incredible framework in identifying and measuring the different importance of dimensions in IS success.

Methodology of the Study

Construct Measurement

Measurement scales for the collection of quantitative research were used from previous instruments that have validity to the content. The information quality was measured by the seven -item scale from Bailey and Pearson (1983), with modification that are relevant to the MOD information system, Bailey and Pearson instrument has been accepted and tested for reliability and validity by several researchers, which proves to be a standard instrument. The system quality construct was measured by adopting a four –item scale from Alshibly (2011). The Chang et al (2009) a five –item scale was used to measure the service quality construct. A four –item measure from previous studies was used to measure Use of the information system (Balaban et al., 2013; Rai et al., 2002).

Satisfaction will be used to evaluate the MOD experience and the attitude that employees have towards this system(Doll and Torkzadeh, 1988). This construct was measure with a four –item scale form Seddon and Yip (1992). The MOD information system perceived benefits defines as the achievement of the organization objectives and the achievement of the end-users using the system. This was a six –item scale adopted from (Alshibly, 2011; Tansley et al, 2001). All items were measured a 5- point scale with anchors ranging from strongly agree (5) to strongly disagree (1).In addition, it makes it easier for us researchers because of how simple it's used, its availability world-wide, simultaneously and helps us to synthesize our Meta data from primary research (Neyeloff, January 20).After t(Bernroider, 2008)the measurements were developed, the validity of the variables was tested. A sample of the survey constructed using these measurement is shown in Appendix A. Table 1 shows the Mod measurement from the questionnaire.

Table 1. Ramada Measurements from Questionnaire

-Construct	Survey Questions	Source
Information Quality	IQ 1: The MOD information system provides information that is exactly what you need. IQ 2:The MOD information system provides information you need at the right time. IQ 3:The MOD information system provide information that is relevant to your job. IQ 4:The MOD information system provides sufficient information. IQ 5: The MOD information system provides information that is easy to understand. IQ 6: The MOD information system provides up-to-date Information.	(Bailey & Pearon, 1983)
System Quality	SQ 1: MOD information system is easy to use. SQ 2: MOD information system is user-friendly. SQ 3: MOD information system provides high-speed information access. SQ 4: MOD information systemprovides interactive features between users and system.	(AlShibly, 2011)
Complementary Technology Quality	CTQ 1: The software on the device (desktop computer, laptop, mobile device) used to access the MOD information system is adequate. CTQ 2: The device hardware (desktop	(Teece, 1986)

	computer, laptop, mobile device) used to access the MOD information system is adequate. CTQ 3: The speed of the Internet connection used to access the MOD information system is adequate. CTQ 4: The reliability of the Internet connection used to access the MOD information system is adequate.	
Computer Self Efficacy	CSE 1: If there was no one around to tell me what to do as I go. CSE 2: If I had never used an information system like it before. CSE 3: If I had only the information system manuals for reference. CSE 4: If I had seen someone else using the information system before trying it myself. CSE 5: If I could call someone for help if I got stuck. CSE 6: If someone else had helped me get started. CSE 7: If l had a lot of time to complete the job for which the information system was provided. CSE 8: If I had just the built-in help facility for assistance. CSE 9: If someone showed me how to do it first. CSE 10: If I had used similar information systems before this one to do the same job.	(Compeau & Higgins, 1995)
Service Quality	SQ 1: The support staff keep the information system software up to date. SQ 2: When users have a problem the information system support staff show a sincere interest in solving it. SQ 3: The information system support staff respond promptly when users have a problem. SQ 4: The information system support staff tell users exactly when services will be performed.	(Chang , Wang, & Yang, 2009)
User Satisfaction	US 1: Most of the users bring a positive attitude or evaluation towards the MOD information system function. US 2: You think that the perceived utility about the MOD information system is high. US 3: The MOD information system has met your expectations. US 4: You are satisfied with the MOD information system.	(Seddon & Yip, 1992)
Use	U 1: The frequency of use with the MOD information system is high. U 2: You depend upon the MOD information system. U 3: I was able to complete a task using the MOD information system even if there was no one around to tell me what to do as I go. U 4: I have the knowledge necessary to use the MOD information system.	(Balaban, 2013);(Rai & Welker, 2002)
Perceived Net Benefits	NB 1: The MOD information system helps you improve your job performance.	(AlShibly, 2011); (Tansley, Newell, &

	NB 2: The MOD information system helps the organization save cost. NB 3: The MOD information system helps the organization achieve its goal. NB 4: Using the MOD information improves the assessment and training. NB 5: Using the MOD information system in workplace increases the productivity. NB 6: Overall, using the MOD information system enhances recruitment and performance management.	Williams, 2001)

Sampling and Data Collection

This paper will use not only DeLone and McLean model of IS (Information System) success but also as a framework to evaluate the MOD information system by using the quantitative research to gather information. The researchers of this paper interviewed the Sales Manager at the Ramada to obtain relevant information of the organization and the information systems. A letter of consent with an attached questionnaire was given to each department that uses the MOD information system. These departments included: Front desk, Accounting, Finance, Sales, Housekeeping and Food and Beverage departments. All the information that was gathered through the survey will be used to complete the data analysis and results of this study. Please see Appendix A for sample of cover letter and survey.

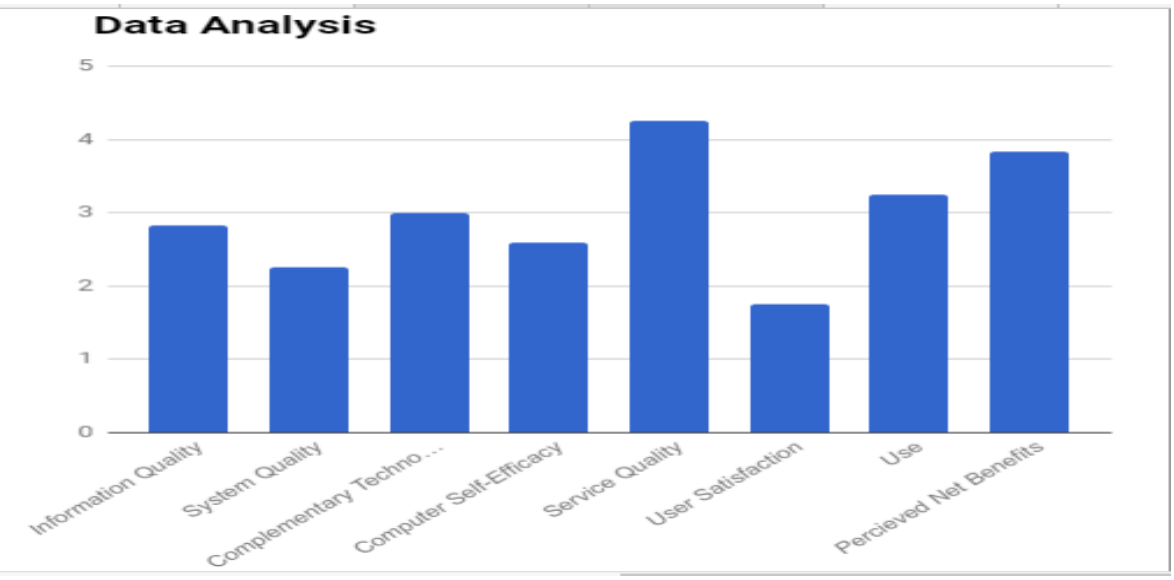
Out of 45 questionnaires that were distributed to the employees at Ramada, only 35 questionnaires were returned, yielding a response rate of 77.8 percent, which is considered acceptable. The respondents' characteristics is presented in Table 2. Female participants represented a slightly higher percentage of the completed sample (approximately 69%) compared to male participants (approximately 31%). 49% of the participants were aged 25-35 years. The completed sample was composed of educated individuals with an Associate Degree of approximately 34%. The participants who had less than 5 years working experience had the highest percentage of 43%, since there are less employees that have 15 years of experience.

Table 2: Characteristics of the respondents

Characteristics	**Number**	**Percentage**
Gender		
Male	11	31.4
Female	24	68.6
Age		
Less than 25	8	22.9
From 25 to 35	17	48.6
Over 35 to 45	4	11.4
Over 45 to 55	4	11.4
Older than 55	2	5.7
Education		
PhD	4	11.43
Masters	6	17.14
Bachelors	4	11.43
Associate	12	34.3
High School	9	25.7
Work Experience		
Less than 5	15	42.9
From 5 to 10	12	34.3
Over 10 to 15	4	11.4
More than 15	4	11.4

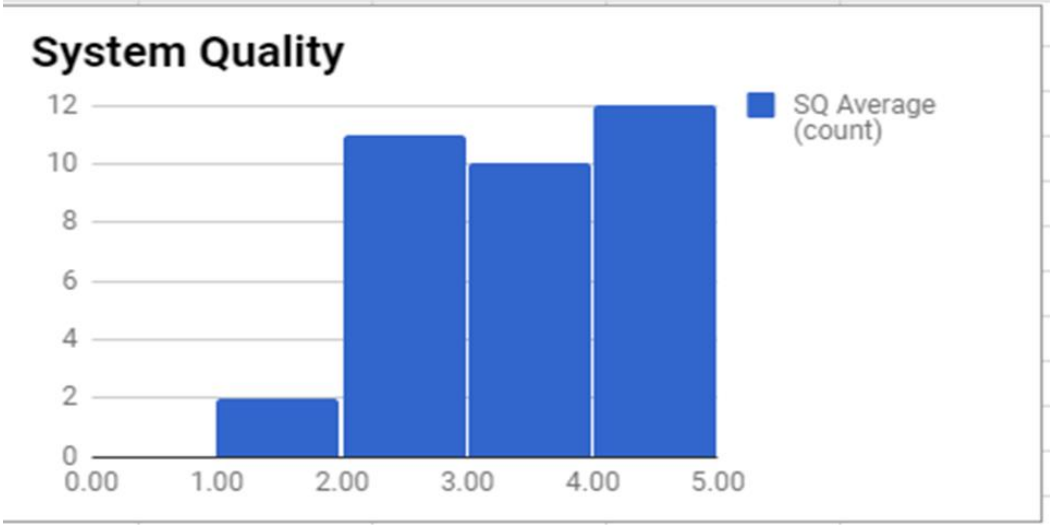
Data Analysis

Table 3: Data Analysis



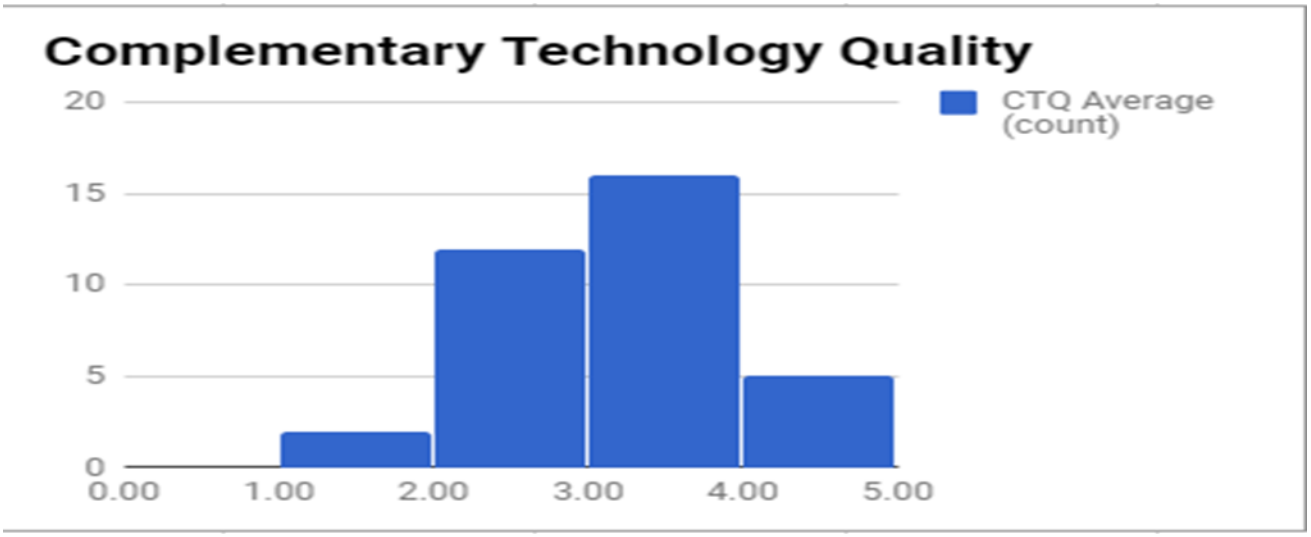
In relation to the data analysis, we notice that majority love the service quality that MOD provides (4.25); furthermore, the employees found the information system to be very beneficial in terms of analyzing and facilitate strategic and operational activities (3.83). Furthermore, majority of the staff wasn't satisfied with the Property Management System within the organization. Lastly, the information success model demonstrates that the service quality is up to par, the MOD system brings a lot of benefits to the organization, very useful, average information quality but not many were satisfied with its functionality.

Table 4: System Quality



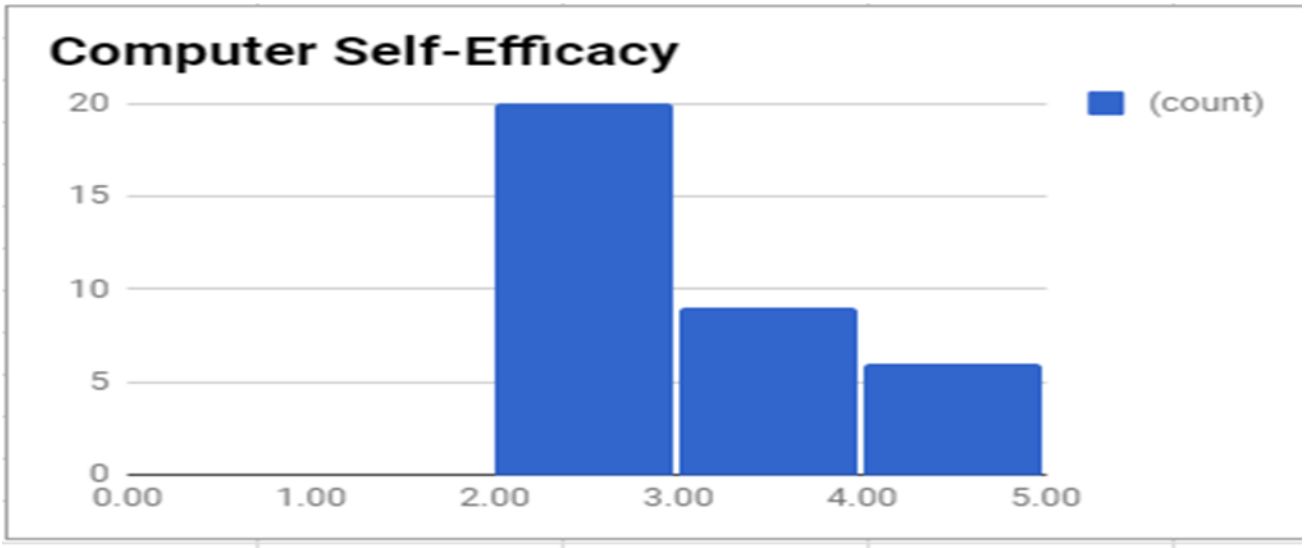
According to the data shown, only fifteen of the majority agreed that the system is easy to use (4.00 – 5.00). However, both ten (3.00 - 4.00) and eleven (2.00 - 3.00) agreed for the most part that probably its user friendly. Lastly, only two of the staff members didn't feel that the service quality wasn't on point which could probably be that MOD high-speed information access wasn't quick enough for those individuals.

Table 5: Complementary Technology Quality



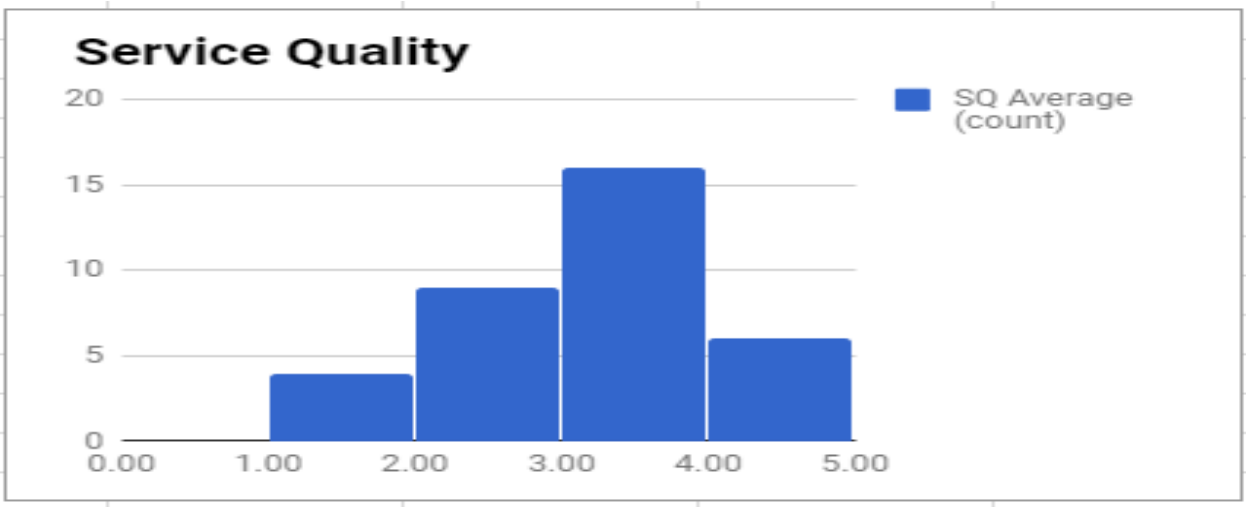
Proportional to the chart, only five of them which is quite a few (4.00-5.00) who strongly agree with the complementary technology quality. Furthermore, only sixteen of the majority agrees to an extent (3.00-4.00) that probably the software accessibility on their desktop computer, laptop and mobile device is pretty adequate. Moreover, twelve of the staff members (2.00 – 3.00).

Table 6: Computer Self-Efficacy



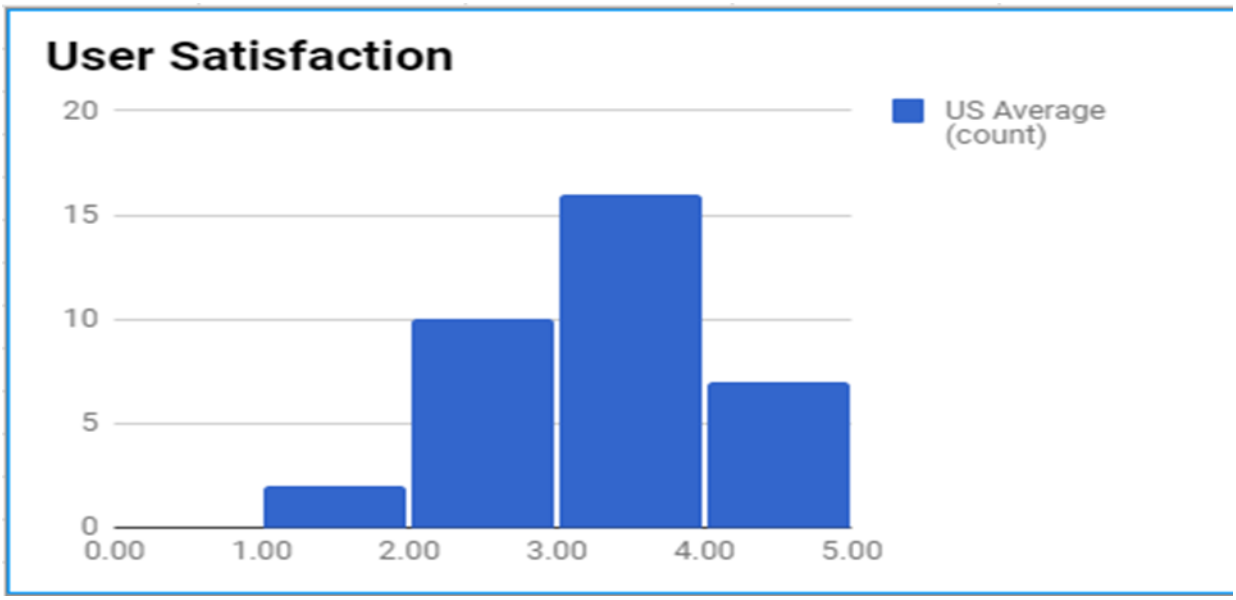
Commensurate with the histogram shown to us, a staggering of twenty personnel (2.00 – 3.00) found that the Property Management System is nicely put together for everyday use at work and very efficient (not to mention easy to use). Moreover, only nine of them agreed that MOD is smack in the middle that it's efficient but has some disadvantage. Moreover, only six of the staff members strongly agreed that the information system is flawless. Lastly, it seems that the employees didn't find any issue with MOD being self- efficacy.

Table 7: Service Quality



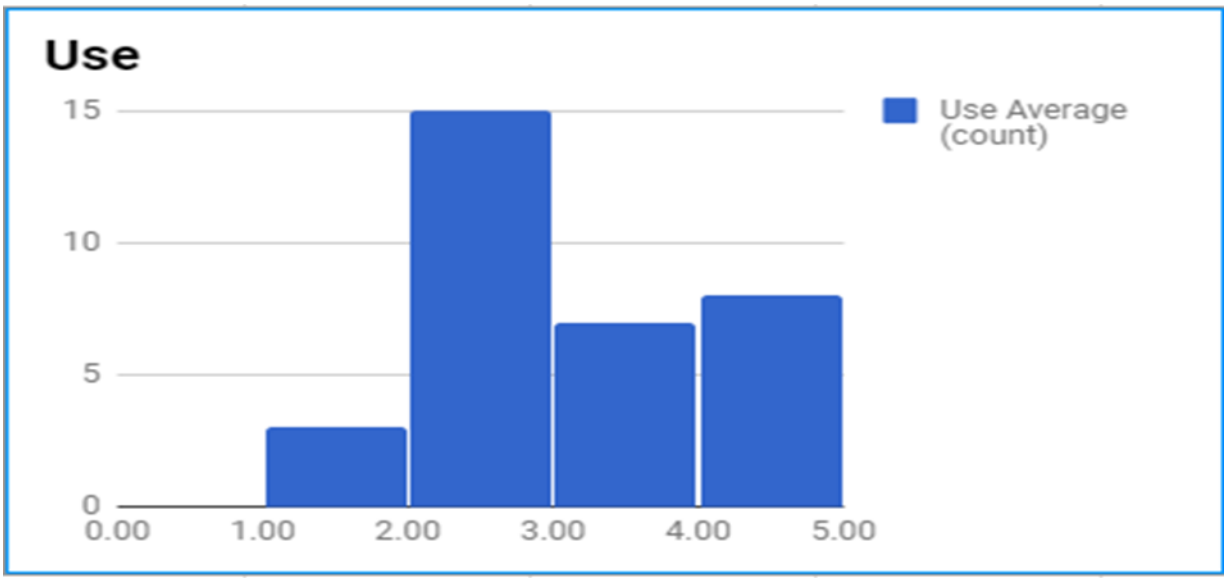
In line with the Service Quality histogram, only sixteen of the workers (3.00 – 4.00) has an ordinary agreement that probably their support staff keep the system up to date. Moreover, only a short amount of nine personnel (2.00 – 3.00) had some agreement that the service quality is ok in terms of support staff response time to a problem by MOD information system. Furthermore, only six of them found their service quality to be excellent (4.00 – 5.00) but, on the other hand only four of them didn't like the service quality of their information system (1.00 – 4.00).

Table 8: User Satisfaction



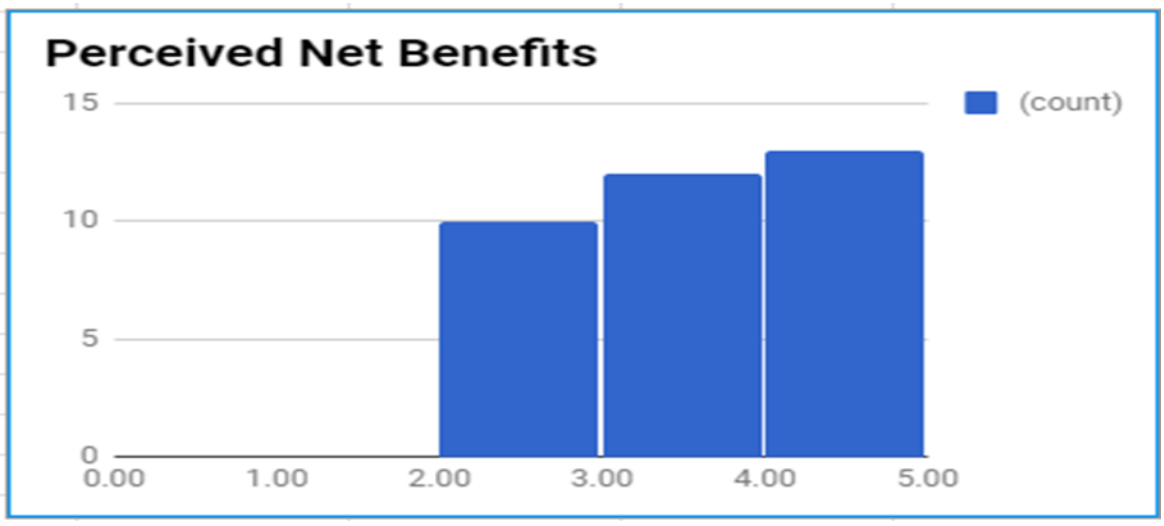
In compliance with the histogram displayed, sixteen of the majority agreed to a point where by the staff were well rounded with the usability and other functions of the information system (3.00 – 4.00). Moreover, only about ten of them (2.00 – 3.00) were satisfied that it brings a positive attitude towards the MOD information system. Furthermore, only seven were completely satisfied with the information system (4.00 – 5.00) and have no inquires what so ever but, only a couple were unsatisfied with their management information system (1.00 – 2.00).

Table 9: Use



In agreement with the histogram provided, only fifteen of the majority agreed that the MOD had some usage within the work place (2.00 – 3.00). In addition, only eight of staff members found completely agreed that they have good knowledge about the Property Management System (4.00 – 5.00) but, only seven of them found the level of usage to be average throughout (3.00 – 4.00). Lastly, only three of them didn't find MOD to be useful at their workplace (1.00 – 2.00).

Table 10: Perceived Net Benefits



In proportion to the histogram shown, only 15 of the majority strongly agreed that they reap a lot of benefits with their information system (4.00 – 5.00). Following by, twelve staff members who also shown a decent amount of liking towards the benefits it brings to the company (3.00 – 4.00). Lastly, only ten staff members agreed that it helps to improve job performances, save cost and achieve its goal. (2.00 – 3.00). Not to mention that no one had any issues in terms of net benefits from the MOD system.

Results

To analyze the Management Information System, we used google excel spreadsheet to estimate and give a rough idea about what employees at the Ramada Hotel think about their information system which is called PMS (Property Management System) or MOD (Manager on Duty) which means the same thing. In

addition, it makes it easier for us researchers because of how simple it's used, its availability world-wide, simultaneously and helps us to synthesize our Meta data from primary research (Neyeloff, January 20). Furthermore, we took the liberty of using "PLS Path Modelling with R" (Sanchez, 2013). Moreover, we exercised a casual path model for user information satisfaction (Kailash Joshi, 2002).

First, we came up with thirty-five questionnaires which target their agreement not only for the quality of MOD but also its use and benefits. As prescribed by DeLone-McLean model (2008, 07) help us to evaluate eight factors such as information quality, system quality, service quality, net benefits and so much more. In addition, we created a mapping system (see table 1.1) that contains numeric keys from one to five within the data in order to distinguish their level of agreement towards each subject by convergent validity. In addition, we distributed 35 questionnaires to the staff members who utilize the MOD system; moreover, the females have a higher representation in the work place (approximately 65%) than males (approximately 31%) and the gender gap between them would be at least 34%. Furthermore, 52% of the participants were aged 25 – 35 years. In addition, 34% of the participants had completed their tertiary level in Associates and lastly 43% of the participants had less than 5 years of working experience. The data for each items exceeded the minimum value of -0.05(DeLone-McLean, 2008, 07). Lastly, the dimension validity will show us how successful Princess MIS system was (DeLone-McLean, 2008, 07). Lastly, we created a mapping system (see table 3) that contains mapping keys from 1 to 5 excluding working experience from 1 to 4.

Conclusion

This research is the concern of measuring the success of MOD (Manager on Duty) or PMS (Property Management System) at the Ramada Hotel. MOD success measurement model was established based on the DeLone and McLean (2003) updated IS success model. The results show that information quality, system quality, service quality, use, user satisfaction, and perceived net benefit are valid measures of MOD success. The hypothesized relations between the six success variables are significantly maintained.
This research provides some important implications of MOD system and management. The proposed model, perceived net benefit measured to be a closer measure of MOD success other than the other five success measures. Perceived net benefit develop only if the formation of perceived quality, system use, and user satisfaction is managed.

The perceived net benefit, organizations increases to the development of MOD with improved information quality, system quality, and service quality that will influence user system behaviour and satisfaction evaluated. The consistent perceived net benefit model system use, was initiate to have the strongest direct and total effect on perceived net benefit which indicates the importance of system that is used for promoting HR staffs. The results clearly indicate that the total effects of information quality on use, user satisfaction, and perceived net benefit are considerably greater than those of system quality and service quality. In relation to the data analysis, we notice that majority love the service quality that MOD provides (4.25); furthermore, the employees found the information system to be very beneficial in terms of analyzing and facilitate strategic and operational activities (3.83). Lastly, majority of the staff wasn't satisfied with the Property Management System within the organization which needs to be tweaked more.
In relation to the information quality only eight strongly agree about the information quality (4.00 – 500). However, fifteen of them still agree up to a certain point from (3.00 – 4.00). In line with the Service Quality histogram, only sixteen of the workers (3.00 – 4.00) has an ordinary agreement that probably their support staff keep the system up to date. In compliance with the histogram displayed, sixteen of the majority agreed to a point where by the staff were well rounded with the usability and other functions of the information system (3.00 – 4.00). The use results indicated that only fifteen of the majority agreed that the MOD had some usage within the work place (2.00 – 3.00). While, in the perceived benefits only 15 of the majority strongly agreed that they reap a lot of benefits with their information system (4.00 – 5.00).

MOD system research results, measured multiple MOD success variables that continues to be important. This model provides a unique depiction of the dynamics surrounding quality measures, satisfaction evaluation, usage, and user-perceived net benefits. The results indicates that perceive the benefit to be more used because the users felt satisfied with its information, system quality, and service quality. This study, suggested that the use, user satisfaction, and perceived net benefit are corresponding yet distinct constructs. The use is partly mediated through user satisfaction in its influence on the perceived net

benefit of the MOD system. From a concrete point of view, our model offers a means for organizations to evaluate and predict the success of MOD system success.

This research had a few limitations, in which we used questionnaires to collect data that regards to involving employees at the Ramada Hotel to willing fill out the forms. If this questionnaire was disturbed to the vast amount of hotel that use the MOD success the results would have been better in regards to what system model is more beneficial. This study provided a structure for understanding MOD success that discovered the impact of services quality on satisfaction, use and perceived net benefit.

References

(n.d.). Retrieved from Mod Hotel Software: www.modhotel.com

A casual path model of the overall user attitudes toward the MIS function: The case of user information satisfaction. (2002, April 26). Retrieved from Science Direct: https://www.sciencedirect.com/science/article/abs/pii/037872069290063L

AlShibly, H. (2011). Human resources information systems success assesment: An integrative model. *Australian Journal of Basic and Applied Sciences*, 157-169. Retrieved from file:///C:/Users/2014110096/Downloads/235467264-Human-Resources-Information-Systems-Success-Assessment-an-Integrative-Model2.pdf

Avery, J. (2017, March 31). *Belize to Host the first National Cybersecurity Symposim*. Retrieved from Curacao Chronicle: http://curacauchronicle.com/hotel-resturant-reviews/

Bailey, J. E., & Pearon, S. W. (1983). Development of a tool for measuring and analysing computer user satisfaction. *Management Science*, 530-545.

Balaban, I. E. (2013). Development of an electronic Portfolio system sucess model: An information system approach. *Computers & Education*, 396-411.

Bernroider, E. W. (2008). IT governance for enterprise resource planning supported by the DeLone-McLean model of information systems success. *Information Management, 5*(45), 257-269. doi:10.106/j.im.2007.11.004

Chang , H. H., Wang, Y. H., & Yang, W. Y. (2009). The impact of e-service quality, customer satisfaction and loyalty on e-marketing: Moderating effects of perceived value. *Total Quality Management* , 423-443.

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a meaure and initial test. *MIS quarterly*, 189-211.

Department, H. R. (2015). *Employment Manual* (Vol. 1). Belize City. Retrieved from file:///D:/MIS/Ramada%20Employment%20Manual%20.pdf

Laudon, K. C., & Laudon, J. P. (2016). *Information systems in Global Businesses Today* (14 ed.). Harlow, Edinburgh Gate, England: Pearson Education Limited. Retrieved from http://bookshelf.vitalsource.com/#/books/9781292094014/cfi/50!/4/4@0.00:2.34

Neyeloff, J. L., Fuchs, S. C., & Moreira, L. B. (2012, January 20). *Meta- analyses and Forest plots using a microsoft excel spreadsheet: Stet-by step guide focusing on descriptive data analysis*. Retrieved from bmpcrenotes: http://bmcresnotes.biomdcentral.com/articles/10.1186/1756-0500-5-52

Neyeloff, J. L., Fuchs, S. C., & Morrie, L. B. (2012, January 20). *Meta- analyses and Forest plots using a microsoft excel spreadsheet:* . Retrieved from Step-by-step guide focusing on descriptive data analysis: https://bmcresnotes.biomedcentral.com/articles/10.1186/1756-0500-5-52

Rai, A. L., & Welker, R. B. (2002). Assesing the validity of IS success models: An empirical test and theoretical analysis. *Information systems research*, 50-69.

Seddon, P., & Yip, S. K. (1992). An Empirical Evaluation of User Information Satisfaction (UIS) Measures for Use woth General Ledgccount Software. *Journal of Information Systems*, 75-92.

Tansley, C., Newell, S., & Williams, H. (2001). Effecting HRM-style practices through an integrated human resource information system: An e-green site? *Personal Review* , 351-371.

Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. Retrieved from https://www.nap.edu/read/1671/chapter/5

Appendix A

"MOD Information Systems" Ramada the Belize City Princess Hotel

March 14th, 2018

Dear Participant:

We are students of the University of Belize, conducting a research paper for the course of Management Information System. All information gather will be used at a conference held by The University of Belize in Belmopan. We are examining the perceptions that employees have on the mode information system used at Ramada. Since you are employed here and have first-hand experiences, we are inviting you to participate in this research study by completing the attached survey. The aim of the study is to evaluate the value added of the mode information system success in the organization. As well as to create available data to which the organization can reference to improve it services to achieve higher performance on operational excellence.

The following questionnaire will require approximately 5-10 minutes to complete. In order to ensure that all information will remain confidential, please do not include your name. If you choose to participate in this project, please answer all questions accurately and return the completed questionnaires promptly to whichever of the members who asked for your participation. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist us in our educational endeavors. The data collected will provide useful information regarding management information systems used in Belize. Completion and return of the questionnaire will indicate your willingness to participate in this study. If you require additional information or have any concerns, please contact us at the information listed below.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to Dr. Kieran Ryan at the Faculty of Science and Technology in Belize City the ITVET Campus.

Sincerely Yours,

_____

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Questionnaire I – "The success of the Mode Information Systems" (All Employees)

Purpose

The University of Belize students are conducting a research to investigate the success of MOD Information System (Property Management System) at the Ramada Belize City Princess Hotel. This questionnaire will be used to determine whether appropriate measures are being used for the organization success.

This questionnaire will only take 5-10 minutes of your time. Your individual response to the questionnaire will be confidential so your name is not required. Any confidential information of the organization is not required.

Instructions

Please answer all questions accurately. Print answers on spaces provided and tick the boxes to mark your answers.

1. Characteristics	Answers:
Gender:	Male ☐ Female ☐
Please enter your age:	
Education:	PhD ☐ Masters ☐ Bachelors ☐ Associate ☐ High School ☐
Work Experience:	Less than 5 years☐ From 5 to 10 years☐ Over 10 to 15 years☐ More than 15 years ☐

Indicate your agreement with each statement by rating it from (1) strongly disagree to (5) strongly agree.

2. Information Quality	Strongly Disagree-----Strongly Agree
The MOD information system provides information that is exactly what you need.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides information you need at the right time.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provide information that is relevant to your job.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides sufficient information.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides information that is easy to understand.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides up-to-date Information.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐

3. System Quality	Strongly Disagree ---------Strongly Agree
The MOD information system is easy to use.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system is user-friendly.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides high-speed information access.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The MOD information system provides interactive features between users and systems.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐

4. Complementary Technology Quality	Strongly Disagree -----Strongly Agree

The software on the device (desktop computer, laptop, mobile device) used to access the MOD information system is adequate.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The devices hardware (desktop computer, laptop, mobile device) used to access the MOD information system is adequate.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The speed of the Internet connection used to access the MOD information system is adequate.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
The reliability of the Internet connection used to access the MOD information system is adequate.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐

Complete the sentence by using: I COULD COMPLETE THE JOB USING THE INFORMATION SYSTEM.

5. Computer Self-Efficacy	**Strongly Disagree -----Strongly Agree**
...if there was no one around to tell me what to do as I go.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I had never used an information system like it before.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…ifI had only the information system manuals for reference.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I had seen someone else using the information system before trying it myself.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I could call someone for help if I got stuck.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if someone else had helped me get started.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I had a lot of time to complete the job for which the information system was provided.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I had just the built-in help facility for assistance.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if someone showed me how to do it first.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐
…if I had used similar information systems before this one to do the same job.	1 ☐ 2 ☐3 ☐4 ☐ 5 ☐

Indicate your agreement with each statement by rating it from (1) strongly disagree to (5) strongly agree.

6. Service Quality	**Strongly Disagree ------Strongly Agree**
The support staff keep the information system software up to date.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
When users have a problem the information system support staff show a sincere interest in solving it.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The information system support staff respond promptly when users have a problem.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The information system support staff tell users exactly when services will be performed.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

7. User Satisfaction	**Strongly Disagree ------Strongly Agree**
Most of the users bring a positive attitude or evaluation towards the MOD information system function.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You think that the perceived utility about the MOD information system is high.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The MOD information system has met your expectations.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You are satisfied with the MOD information system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

8. Use	**Strongly Disagree ------Strongly Agree**
The frequency of use with the MOD information system is high.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
You depend upon the MOD information system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
I was able to complete a task using the MOD information system even if there was no one around to tell me what to do as I go.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
I have the knowledge necessary to use the MOD information system.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

9. Perceived Net Benefits	**Strongly Disagree ----------Strongly Agree**
The MOD information system helps you improve your job performance.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The MOD information system helps the organization save cost.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
The MOD information system helps the organization achieve its goal.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Using the MOD information improves the assessment and training.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Using theMOD information system in workplace increases the productivity.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Overall, using the MOD information system enhances recruitment and performance management.	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Thank you for your participation.