A Framework Based on Human Resource Management Information System (HRMIS) for the Evaluation of Users Satisfaction

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Abstract

In today's knowledge based economy, organizational success depends tremendously on the performance of human resource management (HRM). Furthermore, Human Resource Management (HRM) has recently turned its concentration on knowledge sharing and strategic workforce analysis and has been increasingly evolving into a significant contributor on the organizational strategic management. The aim of this paper is to evaluate previous model on HRM in order to propose a framework based on Human Resource Management Information System (HRMIS) to evaluate users satisfaction. The contribution of this paper is to identify the level of user satisfaction of using HRMIS and whether there is any relationship between information quality, system quality and service quality with user satisfaction of using HRMIS.

Keywords: Human Resource Management; Hrmis; Service Quality; System Quality; User Satisfaction

1. Introduction

The measure of time and assets spent on keeping up the regulatory elements of human asset administration is important. A completely coordinated Human Resource Information System (HRIS) is utilized for business activities, for example, candidate following, execution administration, participation, remuneration and advantages administration, the investigation and planning of workforce (Mayhew, 2011). HRIS is likewise characterized as interrelated parts cooperating to gather, prepare and disperse data to bolster the basic leadership, coordination, control, dissect and perception of an association's Human Resource Management exercises, (Dessler, 2008). A completely incorporated HRIS additionally joins its capacities with every single other division for the effective accomplishment of authoritative objectives in this way it doesn't work in seclusion.

HRIS fundamentally is a framework that gives an individual keep a chance to track of all representatives and data about them. It is typically done in a database or all the more frequently in a progression of interrelated database. The primary capacity of human asset

(HR) includes following numerous information focuses on every representative from work force history, information, abilities and encounters to finance skills. HR capacities and exercises are presently being updated to completely influence on data and correspondence innovation (ICT). The fundamental presumption in utilizing HRIS is that it can help HR divisions in moving from conventional or manual low effect exercises to mechanized, vital and high effect exercises.

IT applications could never have existed without a long and costly incubation period in which PC force and telecom applications were committed to pick up the activity in science and innovation (Strassmann, 2006; Locke, 1999; Leslie, 2000). The essential target of executing data frameworks in the human asset administration is to encourages the association accomplish its objectives (Watson, 1993). Shocking and Scot Morton (1971) propose that the essential target of a data framework in association is to bolster basic leadership.

In today's information based economy, hierarchical achievement depends massively on the execution of human asset administration (HRM) (Lippert & Swiercz, 2005; Troshani et al., 2011). Moreover, Human Resource Management (HRM) has as of late turned its fixation on information sharing and vital workforce investigation and has been progressively advancing into a noteworthy patron on the hierarchical key administration (Rodriguez & Ventura, 2003; Troshani et al., 2011).

This turn in HRM practices is halfway credited to advancements empowering influences, for example, human asset data framework (HRIS) which comprises of methodical methodology and capacities to obtain, store, recover, break down, control and spread important data concerning authoritative HR (Lippert & Swiercz, 2005; Troshani et al.,2011). With a specific end goal to expand the viability of HRM, associations are turning out to be increasingly and reliant on HRIS (Ball, 2001; Lippert & Swiercz, 2005; Troshani et al., 2011).

This concentrate particularly will be founded on assess the relationship between client fulfillment with data quality, framework quality and administration nature of HRMIS. The study embraces and adjusts data framework (IS) achievement model (DeLone & McLean, 1992; DeLone & McLean, 2002). This section will give the establishment for this study by giving outline of HRMIS application and execution.

1.1 The Challenge

It was discovered that the Human Resource Department (HRD) had not fully implementing of HRMIS but nevertheless they had implemented some of its functions such as Personal Record (PR), Establishment Data (ED), Service Record (SR) and Assets Declaration (AD) modules. The consequences, the integration of HR functions among the divisions and units of HRMD become complicated and conflict as the HR functions performed manually, individually and repetitively (Ball, 2001; Lippert & Swiercz, 2005; Troshani et al., 2011). From the researcher observation and feedback received from the employees, the refusal of using HRMIS is due to their dissatisfaction of HRMIS quality.

The aim of this study is to develop a framework to identify the level of user satisfaction of using HRMIS and whether there is any relationship between information quality, system quality and service quality with user satisfaction of using HRMIS.

The remainder of this paper is organized as follows. Section 2 is literature review. We compare models from previous study in Section 3. Section 4 is framework. Section 5 discusses the contribution. The final section contains some concluding remarks.

2. Literature Review

2.1 Human Resource Management Information System (HRMIS)

HRMIS is an integrated, technology-enabled Human Resource Management Information System incorporating Global Best Practices in human resource management. According to an article by Toresa and Torres (1998), HRIS can be defined as a software or online solution for the data entry, data tracking and data information needed for the human resources', payroll, management and accounting functions within a business. HRIS helps in managing of the company's most valued asset which is the human resource.

Chien & Tsaur (2007), conduct a study on exploring the achievement of Enterprise Resource Planning (ERP) frameworks by proposing a halfway expansion and specification of the DeLone and MacLean model of IS achievement. The motivation behind the present examination is to reconsider the upgraded DeLone & MacLean model of IS accomplishment to ERP frameworks. Other than that, the analyst had additionally highlighted case on framework accomplishment from Saarinen's paper which gives four measurements of framework achievement incorporating the fulfillment with the improvement procedure, fulfillment with the framework use, fulfillment with the nature of the IS item and effect of the IS on the association.

The outcomes showed that most recent innovation was the most imperative element in deciding the nature of the framework. Framework quality, for example, execution, adaptability of changes, reaction time, and convenience is a specialized issue. The examination additionally found that framework quality and administration quality measurement are essential measurements for measuring execution ERP achievement.

Ping et al. (2012) conduct a study to look at the impression of consumer loyalty on e-saving money utilizing SERVQUAL model. More or less, this examination figured out how to decide the relationship between dependability, responsiveness, affirmation, sympathy and tangibles with consumer loyalty which differ as indicated by the way of administration and are emphatically identified with consumer loyalty.

By impacting client general quality recognitions, this study utilizes the SERVQUAL model to decide the relative noteworthiness of every administration quality properties. From the examination, it was affirmed that there were three characteristics had a huge association with consumer loyalty: dependability, compassion and tangibles, while responsiveness and certification were rejected.

Masrek et al., (2010), conduct a study on assessing the library gateway viability. The study had characterized the adequacy as between related builds of data quality, framework quality, administration quality, client fulfillment and individual effect. The outcomes got from the clear examination, found that it was apparent that clients appraised positively on all the builds, consequently recommended that the library gateway was viable. The specialist additionally had assessed the ramifications of the study from two points of view which is hypothetical and viable. From the down to earth point of view, the analysts demonstrated that the instrument utilized as a part of the study contains analytic qualities whereupon library entrance implementers can receive to assess the characteristics of their library entryway. The discoveries coming about because of the assessment additionally can be utilized with the end goal without bounds change and upgrade of library entryway implementers.

Hassanzadeh et al., (2012) develop a model for measuring accomplishment of e-learning frameworks in colleges. These days, e-learning has brought about numerous progressions in advanced education, as it rose as another worldview of cutting edge training and has changed

past learning idea (Sun et al., 2008; Wang et al., 2007). In this paper, by joining models and past studies, a model for measuring e-learning frameworks achievement entitled "MELSS" is exhibited to determine the shortcomings of past models and to fortify the quality. In the wake of finishing the markers of calculated model, taking into account understudies, graduated class and educators sentiments in colleges, MELSS model was composed and its wellness was affirmed.

Alshibly (2014) proposes a complete model of e-HRM achievement which recommends that data quality, framework quality, administration quality, client fulfillment and saw net advantages are achievement variables in e-HRM. This study gives the principal experimental test of an adjustment of DeLone and McLean's IS achievement model with regards to e-HRM. The model comprises of six measurements which is data quality, framework quality, administration quality, use, client fulfillment and saw net advantage.

The results show that HR staffs perceive the benefit of an e-HRM system because they have used it and felt satisfied with its information system quality and service quality. While system usage and user satisfaction are commonly acknowledged as useful proxy measures of system success (Bailey & Pearson, 1983; Doll & Torkzadeh, 1988 ; Ives et al. 1983) this study suggests that user-perceived net benefit can be considered as the variable closer in meaning to success than system usage and user satisfaction.

The study clearly indicates that the total effects of information quality on use user satisfaction and perceived net benefit are substantially greater than those of system quality and service quality. That is in the context of e-HRM beliefs about information quality have a more dominant influence on use user satisfaction and perceived net benefit than beliefs about system quality and service quality.

Table 1. Summary of the previous studies

Author	Aim of study	Research Method	Main Findings
Chien & Tsaur (2007)	To re-examine the updated DeLone and McLean information system success model of ERP system success	Quantitative (a survey of ERP users at three high-tech firms with 204 respondents)	The study suggests that system quality, service quality and information quality are most important successful factor
Masrek et al. (2010)	To examine the effectiveness on specific library portal	Quantitative (a survey of university student with 400 respondents)	The library portal had met the user expectations in terms of information quality, systems quality and service quality
Ping et al. (2012)	To examine the perception of customer satisfaction on e-banking using SERVQUAL model	Quantitative (a survey of e-banking users with 50 respondents)	The results show that responsiveness, empathy and tangibles, have

			more contribution to satisfy the e-banking users
Hassanzadeh, Kanaani & Elahi (2012)	To survey and present a model for measuring success of e-learning systems	Quantitative (a survey of instructors, university students and alumni with 369 respondents)	Model entitled measuring e-learing systems success (MELSS) had found to be the suitable model to measure e-learning system success
Alshibly (2014)	This study provides the first empirical test of an adaptation of DeLone and McLean's IS success model in the context of e-HRM.	Quantitative (a survey of Human Resource (HR) managers and HR employees from a large Jordanian governmental ministry with 104 respondents)	HR staffs perceive the benefit of an e-HRM system because they have used it and felt satisfied with its information system quality and service quality.

2.2 User satisfaction

   User satisfaction is an element that intervenes enhanced levels of administrations or framework execution felt by clients and an effective IS. As it were, user satisfaction is one most generally utilized segments as a part of the IS achievement model as a cause variable affecting the accomplishment of a data framework quality. Ives and Olson (1998) expressed that client fulfillment was the level of meeting the data needs of clients. Estimation of client fulfillment is typically made out of encountering data framework products or administrations and after that assessing the outcomes. Nine inquiries regarding fulfillment with HRMIS quality and offered the reason for HRMIS utilized by the respondent and also the level of utilization of data gave by HRMIS.

3. Model Comparison

   As a guidance of this research a theoretical or conceptual model has to be drawn based on five related studies so that it can afford the direction of this research. There are five models that have been selected and will be discussed in this section. All these models are important because it will give some overview and ideas on the evaluation of user satisfaction on information system.

   Chien & Tsaur (2007) conduct a study on examining the accomplishment of Enterprise Resource Planning (ERP) frameworks by proposing a fractional expansion and respecification of the DeLone and MacLean model of IS achievement. The specialist had proposed achievement model which is multi-dimensional model and the measurement are interrelated. The three measurements are quality measurements, use measurements and advantages of

ERP frameworks. The clients encounter the quality measurement which comprises of framework quality, data quality and administration quality by utilizing ERP framework as a part of their works and basic leadership process.
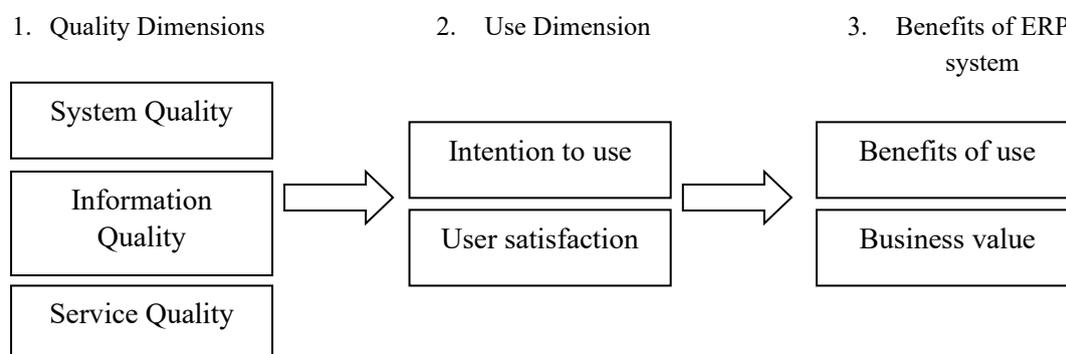
1. Quality Dimensions   2.   Use Dimension   3.   Benefits of ERP system

| System Quality |
| Information Quality |
| Service Quality |

| Intention to use |
| User satisfaction |

| Benefits of use |
| Business value |

Figure 1. Revised ERP success model (Chien & Tsaur, 2007)

The intention to use ERP and the three quality dimensions influence the individual value of using ERP.   Collective individual values of using ERP systems trigger influence on organizational performance. Sequencing relative individual works from business processes, the individual impacts also collectively affect user satisfaction. The study suggested that the system quality, information quality and service quality is largely determined the success of implementing ERP. The results indicated that latest technology was the most important factor in determining the quality of the system. System quality, such as performance, flexibility of changes, response time, and ease of use is a technical issue. The research also discovered that system quality and service quality dimension are important dimensions for measuring implementation ERP success.

Masrek et al. (2010) conduct a study on evaluating the library portal effectiveness. The framework used in the study based on the work of Delone & Mclean (1992) and Delone & Mclean (2002). The study had defined the effectiveness as inter-related constructs of information quality, system quality, service quality, user satisfaction and individual impact.

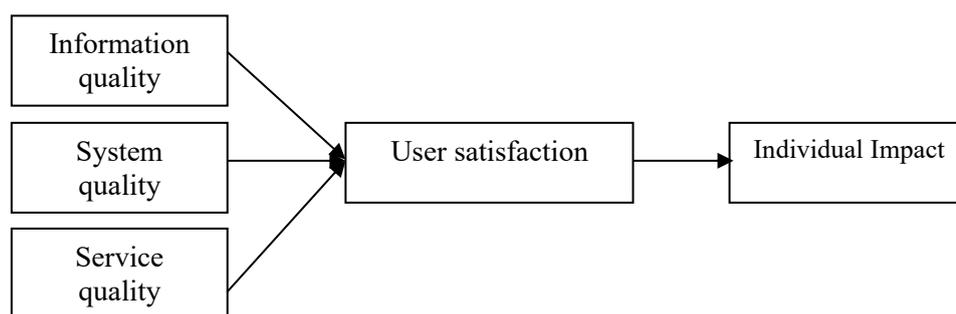| Information quality |
| System quality |
| Service quality |

| User satisfaction |

| Individual Impact |

Figure 2. IS success model (Delone & Mclean, 1992)

The results got from the clarifying examination, found that clearly customers assessed emphatically on all the creates, thusly prescribed that the library passageway was convincing. The model involve the interrelationship works of information quality, organization quality, customer satisfaction and individual impact proposed to be further examined in different IS execution settings.

Ping et al., (2012) form a study quantitative technique to take a gander at the perspective of shopper steadfastness with e-sparing cash things and organizations through the web. This study arrangements to review the perspective of   customer satisfaction on e-sparing cash using SERVQUAL model. SERVQUAL model was characterized by Parasuraman, Zethaml & Berri (1985) that for both cravings and perceieved execution.

The study asserted that there were three qualities had an imperative relationship to buyer steadfastness which is constancy, empathy and tangibles, while responsiveness and confirmation were rejected. The sensitivity, for instance, taking awesome thought of their customers in all courses of action, give phenomenal thought and brief information to their customers, it is found to have the best effect of shopper unwaveringness towards e-keeping cash. It then took after by unmistakable variables, for instance, structure workplaces which is having forefront and redesign looking environment. Past examinations of Moberek (2007) and Jannatul (2010) supported the present study disclosures where they found a relationship between purchaser dedication and e-dealing with a record organization. The investigation model is dense in Figure 3.
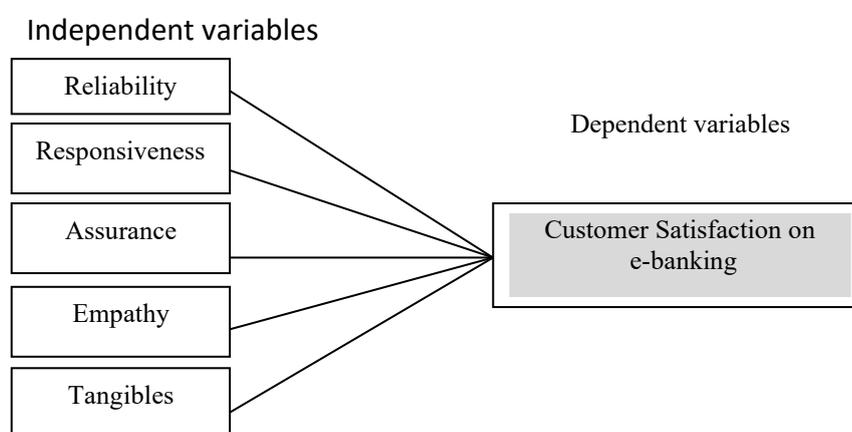

Figure 3. SERVQUAL model (Ping & Suki, 2012)

However, this study does not include all possible variables which can affect customer satisfaction towards e-banking service. The model serves as a basic overview of the customer satisfaction concept that emphasizes the effect between variables on customer satisfaction. It needs to be further improved with other possible independent variables which have significantly impact on customer satisfaction for example customer loyalty, customer characteristics and customer involvement.

Hassanzadeh et al., (2012) had displayed a model for measuring the e-learning achievement which is called Measuring E-learning System Success (MELSS). In view of the outcomes, segments, for example, client fulfillment, specialized nature of the framework, instructive nature of the framework, substance and data quality, goal to utilize, advantages of utilizing framework, administration quality, utilization of framework, steadfastness to framework and objective accomplishment, are appropriate for measuring e-learning frameworks achievement. The analyst had affirmed the wellness of this model in the wake of settling the pointers of theoretical model which taking into account understudies, graduated class and educators' sentiments in colleges.

Based on MELSS model, it found that technical system is one component that had direct effect on user satisfaction that can also affect the success of e-learning system. Therefore,

whatever the technical quality of e-learning systems is more, user satisfaction is higher. Based on MELSS model, intent to use the system has direct effect on system usage. Moreover, even when the user is going to use system and still this intention has not actualized, the user will be loyal to the system and suggest to others. On the other hand, the greater use of e-learning system leads to the more loyalty to the system and also benefits of using system will be added. Results of the case study suggest that more interests of using e-learning systems itself will cause the user goals achievement, this means that the more e-learning systems user satisfaction, the more achievement of personal and educational goals of user.

Alshibly (2014) proposes an extensive model of e-HRM achievement which recommends that data quality, framework quality, administration quality, client fulfillment and saw net advantages are achievement variables in e-HRM. This study gives the main experimental test of an adjustment of DeLone and McLean's IS achievement model with regards to e-HRM. The model comprises of six measurements which is data quality, framework quality, administration quality, use, client fulfillment and saw net advantage. The outcomes demonstrate that HR staffs see the advantage of an e-HRM framework since they have utilized it and felt fulfilled by its data framework quality and administration quality.
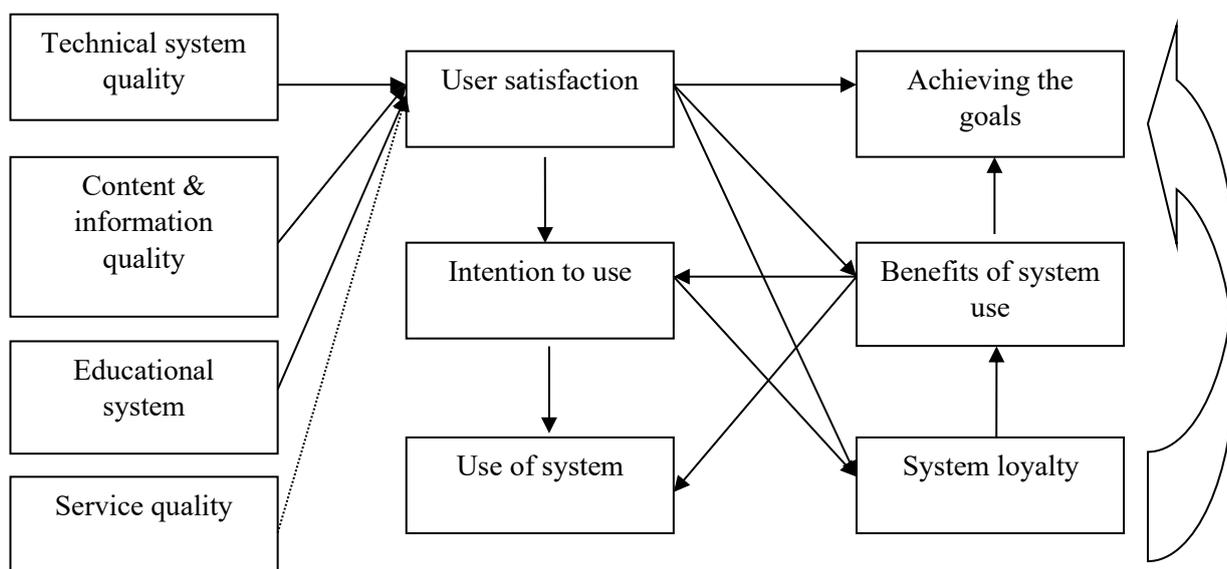

Figure 4. MELSS model (Hassanzadeh et al, 2012)

The concentrate plainly shows that the aggregate impacts of data quality on use client fulfillment and saw net advantage are considerably more prominent than those of framework quality and administration quality. That is with regards to e-HRM convictions about data quality impact use client fulfillment and saw net advantage than convictions about framework quality and administration quality. The exploration model is condensed in Figure 5.
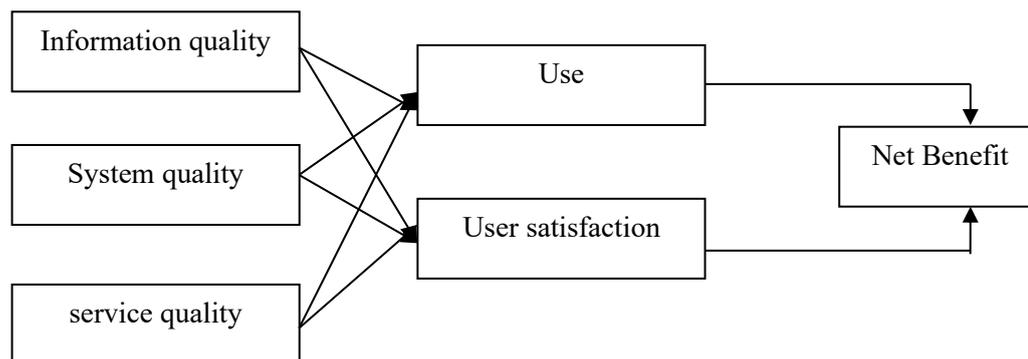
Figure 5. Deleon and Mclean IS success model (Delone & Mclean, 2003)

4. Theoretical Framework

Based on the model discussed in the previous section, we adopt the Delone & Mclean (2003) framework approach. This framework was selected because it provides a close relationship with the current study, which is to evaluate the user satisfaction of using HRMIS. In this study the relationship between the independent variables and dependent variable will be examined and hypotheses are proposed in this section.
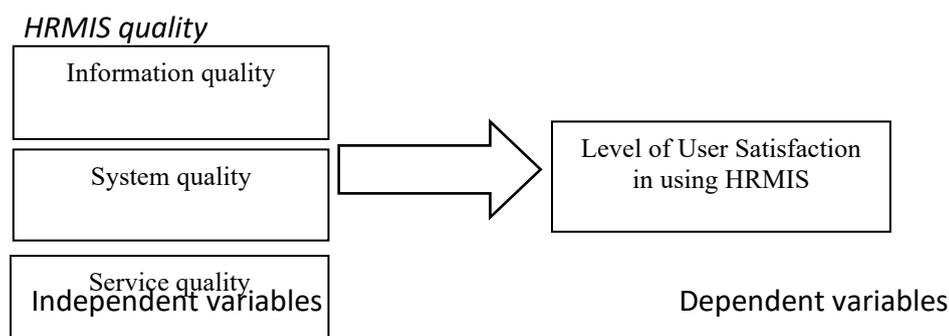

Figure 6. Proposed framework.

In Figure 6, the dependent variable is depending on or caused by other variables. It is a primary interest to be studied in the research. This study dependent variable is the user satisfaction of using HRMIS among employees. The independent variable is the variables that presumed to cause or determine a dependent variable. It is a variable that influencing dependent variable either it positive or negative way. These research independent variables are the relationship of HRMIS quality which is information quality, system quality and service quality.

4.1 User satisfaction

Client fulfillment might be characterized as the degree to which clients trust the data framework accessible to them meets their data prerequisites (Ives et al., 1983). In the data framework writing, the client fulfillment develop has been alluded to as "felt need", "framework", "MIS gratefulness", "observation", and "convictions" (Ives et al.1983; Swanson, 1982). Cyert & March's (1963) proposed that the idea of client fulfillment if a data framework meets the necessities of the clients, the clients' fulfillment with the data framework will increment. Then again, if the data framework does not give the required data, the clients will get to be disappointed. Client fulfillment is a variable that intercedes enhanced levels of

administrations or framework execution felt by clients and a fruitful IS. At the end of the day, client fulfillment is one most generally utilized segments as a part of the IS achievement model as a cause variable affecting the accomplishment of a data framework quality. Ives & Swanson (1982) expressed that client fulfillment was the level of meeting the data needs of clients. Estimation of client fulfillment is generally made out of encountering data framework products or administrations and after that assessing the outcomes.

4.1.1 Information quality

Information systems are created to provide useful decision making information to individuals and groups by storing, maintaining, processing and managing information resources. Their values are realized when the information provided is applied to operations. Ives & Swanson (1982) claimed that information quality is a critical factors that determines the success of information systems. Information quality refers to the quality of outputs the IS produces (Delone & McLean (1992), which can be in the form of reports or online screens. Ballou & Pazer (1987) define four dimensions of quality which is accuracy, currency and format related to the presentation layout of information outputs.

Shahibi et al., (2013) assessed the client discernment level on web data quality by utilizing data validity variables that comprises of dependability, reasonableness, significance, exactness and profundity. In view of the study, the outcomes found that dependability, decency, significance and profundity have critical effect on client discernment level of web data quality while precision the other way around.

Precision is most regularly characterized as rightness in the mapping of put away data to the fitting state in this present reality that the data speaks to (Delone & Mclean, 2003; Nelson, Todd, & Wixom, 2005; Wang, 1996). Culmination implies that all qualities for a specific variable are recorded. It concentrates on whether all qualities for all variables are recorded and held (Nelson, Todd, & Wixom, 2005; Zmud, 1979; Fisher & Kingma, 2001; Narasimhalah, Toni, & Wong, 2010; Wang, 1996). Consistency alludes to when the representation of the information worth is the same in all cases (Ballou & Pazer, 1987). Coin alludes to the extent to which data is progressive, or the extent to which the data definitely mirrors the present condition of the world that it speaks to (Delone & Mclean, 2003; Bailey & Pearson, 1983; Barki & Huff, 1985).

Accordingly, there are four general classifications of data quality distinguished for this examination. Position measures the extent to which framework capacities and design and archive arrangements are reasonable for data use. Cash measures that it is so natural to pursuit data and HRMIS offers data to clients continuously. Precision measures the extent to which data is solid, adequate and the level of utilizing the data without remedy. Importance measures the extent to which data in a framework is identified with a client's undertaking and the level of different alternatives relying upon the client's errand.

4.1.2 System quality

System quality represents the quality of the information system processing, which includes softwares and data components. System quality additionally measures the degree to which the framework is in fact sound, (Seddon, 1997) noticed that system quality is worried with whether there are bugs in the system, the consistency of client interface, convenience, nature of documentation and infrequently, quality and viability of the system code. Delone & Mclean (2003) report that system quality is measured by traits, for example, usability, usefulness, dependability, information quality, adaptability and joining. Sedera & Gable (2004) created

and approved a far reaching instruments for framework quality which brought about ten traits which is usability, simplicity of learning, client prerequisites, system highlights, system exactness, adaptability, advancement, movement, joining and customization.

In this way, from the past exploration there are two general classes distinguished for system quality. The network measurement reflects ASP-based HRMIS for similarity with other programming and the IT device. The convenience measurement means usability, openness and steadiness being used.

4.1.3 Service quality

Service quality was measured as quick responsiveness, assurance, empathy and following-up service. Delone & Mclean (2003) define service quality as the overall support delivered by he service provider and it applies regardless of whether thie support is elivered by the IS department, a new organizational unit, or outsourced to internet service provider. They measured service quality through three attributes which is assurance, empathy and responsiveness.

Therefore there are four broad categories for information quality which is responsiveness, follow up service, assurance and reliability. Responsiveness measures quickness of reaction to change in the situation and quickness of technical support for maintenance and repair. Follow up service measures the degree to which user's education, manuals and advice are provided to users during use. Assurance measures the degree to which the HRMIS service provider possesses knowledge of the construction field and whether the HRMIS service provider is faithful. Reliability is the degree of trust of safety regarding data security and capability

5. Contribution

Hypothetically, this study can add to the human asset data framework research body in the accompanying two ways: (a) This concentrate further analyzes the HRMIS quality measurements as far as what ought to be utilized for human asset data framework assessments. In the interim, the three measurements of HRMIS quality have a tendency to have more in like manner in client fulfillment; and (b) this study add to the hypothesis by further experimental testing of the DeLone and McLean IS Success Model in an alternate setting and framework connection than in past studies as prescribed by different creators (e.g. DeLone & McLean 2003; Iivari 2005). Subsequently this study is among a couple study to exactly approve a thorough achievement model for Human Resource Information System (HRIS). Along these lines this study progresses the hypothetical advancement in the region of such frameworks serving as a premise for future exploration in this field. Additionally by utilizing a set up IS hypothesis as the hypothetical premise for a benchmarking of specialist study, this study is an endeavor to apply thorough exploration to a pragmatic exceedingly significant issue.

6. Conclusion

With the advent and development of HRMIS research measuring multiple HRMIS success variables continues to be important. This model gives a rich depiction of the progression encompassing quality measures fulfillment assessment utilization. The outcomes demonstrate that HR representatives fulfilled by HRMIS on the grounds that they had conviction with its data quality, framework quality and administration quality. From a down to earth perspective our model offers a methods for associations to assess and anticipate the

achievement execution of HRMIS. The HRMIS achievement like the accomplishment of whatever other data framework is multidimensional and associated in nature. Attributable to the examination results experts now know more about the levers that enhance their HRMIS and can organize their speculations appropriately.

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