



THE INFLUENCE OF INFORMATION SYSTEM SUCCESS FACTORS TOWARDS USER SATISFACTION IN UNIVERSITI TEKNIKAL MALAYSIA MELAKA

Yusri Arshad, M. Azrin and Siti Nor Afiqah

Department of Technology Management and Technopreneurship, Universiti Teknikal Malaysia, Melaka, Malaysia

E-Mail: ayusri@utem.edu.my

ABSTRACT

The aim of this study is to investigate the influence of information system (IS) success factors towards the user satisfaction in UTeM. In the last few decade, the process of linking the information system (IS) with user satisfaction has been currently taking concern in IS research. This knowledge is valuable as it can help in the development of better methods for IS in future and evaluating their impacts on the individual and organization. The rapid changes in information technology (IT) and business environment have challenged the Universities capabilities in planning the appropriate information systems strategies for their organizations. The increased number of user population in the Malaysian Public Universities shows a clear need of improvement in the strategic information system planning used. The main objective of this study is 1) the important factors contributing towards Information system success; 2) to determine IS success factors influencing user satisfaction at UTeM; and 3) to determine the most relevant IS success factors that influences the user satisfaction such as System quality, information quality, service quality and system use. The study adopted quantitative method to collect data and analysis, where 100 respondents from UTeM were chosen to answer the questionnaire survey regarding their satisfaction towards the said factors. From the result, there is a positive relationship between the four factors with the user satisfaction. In order to develop the high user satisfaction, the information system department of UTeM should look into the entire factor that has significantly influenced the user satisfaction. It is also recommended that an extensive research is done to other organizations in Malaysia.

Keywords: Success factor, Information system, User satisfaction, Institutes of Higher Learning, Malaysia.

INTRODUCTION

In the last few decade, the process of linking the information system (IS) with user satisfaction has been currently taking concern in IS research. This knowledge is valuable as it can help in the development of better methods for IS in future and evaluating their impacts on the individual and organization.

Many researchers have done their research on strategies, structures, productivity, work, design and individual task, all have been considers (Hendriks, et al., 2007). Thus, these research has led researchers interest in exploring the differences and similarities among models and constructs that further will help IS researchers understand users expectation about the IS they use. Information system plays important part for the contemporary university. The achievements of University in the education and the science sectors are mainly depend on the university computerization activities and the level of that computerization.

User satisfaction is generally recognized as one of the most important steps to ensure the success of an information system (Xiao and Dasgupta, 2002; Ajoye, 2014). Xiao and Dasgupta (2002) further explained that in the follow up development of the IS component, there is a significant changes occur in information technology, especially with the high intensity growth of the Internet. The Internet has brought new opportunities for the user to get access of information. People literally just apply the component that they find suite with their studies by measured the extent of user satisfaction that it is valid for

web-based information systems. Sufficiency of information given may not be an issue for web-based information systems because it is much easier to get access to any information these days.

According to Kudrass (2006), the information system (IS) that been used in University nowadays is created as the integrated system, aiming to computerize all university processes. The process used for general university including registrations and classifications. IS can be defined as a set of interdependent and related element or components that will gather, store, process, record data and information that can be used to strengthen the process of decision-making (Al-adaileh, 2008). The reason why the University is using this IS because it allows individual users to avoid the different interpretation of the same data. As we all know that data are stored in a centralized database. This way it allows the avoiding of data duplication. Later on, information is gathered, out to the database and managed, where the first sources are placed especially in the university subdivisions. That is why the circulation time of documents decreases due to the less logic mistakes made. Search and elimination of mistakes can be done effectively.

The rapid changes in information technology (IT) and business environment have challenged the Universities capabilities in planning the appropriate information systems strategies for their organizations. The increased number of user population in the Malaysian Public Universities shows a clear need of improvement in the strategic information system planning used.



Information system used by the academic staff is the most important in doing their task, assignment, project and lecture.

After all, the Information system success might have something to do with the way in which information system departments provide and maintain the systems for their users, and how they manage their user expectations. If we can understand those expectations and how to measure and manage them better, the chances of success will be improved. By using the service level measured, we can actually determine whether we have or not succeeded in any particular instance, but we always have to remember that the key that brings towards successful information system is to understand the user perceptions and the factors that influence them. Today, many organizations claim that technology and IS related decisions be made with a clear understanding of business and organization strategy and direction.

There are few studies conducted on the relationship between IS Success with user satisfaction and also the most significant IS Success that contribute to the user satisfaction. As stated on the above problem statement, this research explored the following key questions:

1. What are the important factors contributing towards Information system success?
2. What is the relationship between system quality, information quality, service quality and system Use with the user satisfaction at Universiti Teknikal Malaysia Melaka (UTeM)?
3. What is the most significant IS Success factor that contributes to the user satisfaction whether system quality, information quality, service quality or system use?

There are various types of IS evaluation frameworks investigating different aspects at both organizational and individual levels. These efforts have identified some main aspects and relationships in this area. However, the lack of a conceptual framework used in Information System has motivated researcher to do this study.

Conflicting results from previous research in the IS and its influence on user satisfaction have motivated this study of the potential impacts and values of the IS for users. In addition, a recent concern has appeared about the quality of information systems, information quality and their impacts on user satisfaction. This research has potential to make a significant contribution to the IS literature through confirming the role played by certain variable identify in the research literature as determinants of user satisfaction and the relative importance for each variable. Examining the IS Success that impact users satisfaction signifies a new step which will lead to a better understanding of what has been reported in the literature and open a new path in this area.

In short, the research on IS Success and users satisfaction is still a growing field, but has reached a level of maturity in some aspects, such as user satisfaction. This study is conducted to give an overview to Malaysia Public

Universities academic staff and student in identifying the relevant IS Success factors that are associated to their satisfaction.

In order to achieve the underlying purpose, it is essential to determine the objectives of the study. The main objective of this study is 1) to determine IS success factors influencing user satisfaction at Universiti Teknikal Malaysia Melaka (UTeM); and 2) to determine the most relevant IS success factors that influences the user satisfaction such as System quality, information quality, service quality and system use. This study will later show whether the system quality, information quality, service quality and system use exist in IS delivery in UTeM.

LITERATURE REVIEW

Information System

Information system (IS) has been defined in terms of two perspectives: first perspective is relating to its function and the second one relating to its structure. According to Weber (1987), from a functional perspective, an Information System is a technologically implemented medium for the purpose of recording, storing, and exchanging linguistic expressions as well as for the supporting of inference making. From a structural perspective, an Information System consists of a collection of people, processes, data, models, technology and partly forming a cohesive structure which serves some organizational purposes. The functional definition has its merits in focusing on what actual users from a conceptual point of view do with the information system while using it.

Thus, the structural definition makes it clear that IS consists of socio-technical systems such as systems consisting of humans, behavior rules, conceptual and technical artifacts. An information system can be defined technically as a set of interrelated components that collect, process, store, and distribute information to support decision making and control in an organization. In addition, the decision making, coordination, and control, information systems may support the managers and workers to analyze problems, visualize complex subjects, and create new products. There are three activities in an information system produce the information that organizations need for them to make decisions, control operations, analyze problems, and create new products or services. These activities include the input, processing, and output. Input captures or collects raw data from the organization or its external environment. Processing converts this raw input into a more meaningful form. While, Output transfers the processed information to the people who will use it or to the activities for which it will be used. Information systems also required feedback from the user, which is an output that is returned to appropriate members of the organization to help them evaluate or correct the input stage.

Information System is an organized combination of people, technical and physical devices, processing information instructions, communications channels, and



stored data that will later on play their role for gathering, storing, using and distributing information within the organizations. When modeling an information system, it is not only concern on the way it is managed, the way it is implemented, the way it is used, the impact it has on such factors as quality of working life or the distribution of power in organizations. However, it is more concerned with information systems as independent artifacts that bear certain relationships to the real-world system they are intended to model. Researcher try to show that advantages exist from decoupling the study of these issues from the study of certain other properties that can be identified when information systems are conceived as independent artifacts that have been supported by Weber (1987)

User Satisfaction in Information System

The definition of user satisfaction has been widely debated as organizations increasingly attempt to measure it. User satisfaction can be experienced in a variety of situations and connected to both goods and services. It is a highly personal assessment that is greatly affected by user expectations. Satisfaction also is based on the user's experience of both contacts with the organization on the business literature and personal outcomes. User satisfaction differs depending on the situation and the product or service they are dealing with. According to Padilla (1996) user may be satisfied with a product or service, an experience, a purchase decision, a salesperson, store, service provider, or an attribute or any of these. Some researchers completely avoid 'satisfaction' as a measurement objective because it is used too fuzzy an idea to serve as a meaningful benchmark based on research done by Wreden (2004). Instead, they focus on the user's entire experience with an organization or service contact and the detailed assessment of that experience. User satisfaction is a highly personal assessment that is greatly influenced by individual expectations. To avoid difficulties root from the user expectations and differences, some experts urge organization to concentrate on a goal that's more closely linked to user equity.

To measure the information system success it required five components that include such as content, format, accuracy, ease of use, and timeliness. Following the development of IS component, there is a significant changes occur in information technology, especially with the high intensity growth of the Internet. For instance, the widespread use of web technology and the drastic improvement of Internet-based information system have given a clear impression of the tremendous increase in the number of Internet hosts and web sites provided. This information later can be shared across the local state and national boundaries.

Some definitions are based on the observation on the user satisfaction or dissatisfaction resulting from either the confirmation or disconfirmation of individual expectations regarding the service or product they have used. Meanwhile, Petruzzellis, et al., (2006) have seen customer satisfaction as a result of user assessment of a service based on comparison of the perception of service

delivery with their prior expectations. In the public sector, the definition of user satisfaction is often linked to both the personal interaction with the service provider and the outcomes experienced by service users. The qualities of relationships and staff were central to positive outcomes as Meinema (2005) explain that the user satisfaction is a highly variable assessment that every individual makes based on his/her own information gather, expectations, direct contact interaction and impact factor, that will makes sense to involve and consult users when designing user satisfaction approaches.

Key factors contributing to IS success

According to Pal Kaur & Aggrawal (2013), there are 10 factors contributing to IS success. Service quality, system quality, information quality, user satisfaction and system use (perceived usefulness) were used in this research as they are more relatable to university's information system usage, considering the focus of the system are mainly for learning and data storage/processing.

1. Service quality;
2. System quality;
3. Information quality;
4. Management support;
5. Perceived ease of use;
6. Perceived usefulness;
7. Training;
8. User satisfaction;
9. User involvement.
10. Behavior intention

Four strong factors were chosen from the list to be investigated in this research as researchers would like to focus on a smaller scope in UTeM before furthering the research in future. Moreover, each of the factors chosen has a strong relation to learning-based system.

1) System Quality

Previous researcher Delone (2002), defined system quality as whether there are errors in the system, the consistency of the user interface, ease of use, quality of documentation, and quality and maintenance of the program code. They believed that higher-quality systems should be perceived as easier to use and ultimately have higher levels of usefulness and use.

Delone (2004) suggested additional dimensions such as ease of use, reliability, functionality, data quality, flexibility, and integration as a measurement of system quality. A comprehensive instrument for system quality was developed and validated by Sedera & Gable (2004), which resulted in nine attributes ease of use, ease of learning, user requirements, system features, system accuracy, flexibility, sophistication, integration, integration, and customization. System quality was also found to be strongly related to user satisfaction, for knowledge management system, based on study conducted by Kulkarni, et al., (2006).



According to Wixom & Watson (2001) stated that the system quality in the case of data warehousing has been shown to be positively associated with perceived net benefits in terms of individual satisfaction and ease of decision making and this will resulting in increased of an internal organizational efficiency. While, Bradley, et al. (2006) in the study determine that system quality is positively associated with organizational impact at the operational level within the firms.

Furthermore, Salmela (1997) explained that to create satisfaction value for a firm through its information systems, the system should ensure efficient delivery of IS through system attributes such as availability of documentation and ease of use. A system with high composure with the one that uses modern technology and provides user-friendly interfaces will lead to high organizational impact in terms of user satisfaction as they feel comfort with easy-to-use systems. This system would be most effective for the user to handle the organization information due to the organization user-friendly and well-integrated systems and the fast response times.

A flexible system that can be modified easily and quickly, thus fulfilling user information overrated particular, this will lead to relevant and up-to-date information output to the user, indicating the high quality of the information. According to Gorla, et al. (2009) describe that a system that utilizes user-friendly and modern technology can present information to users in an easy-to-understand format, enabling them to use information systems effectively. A well-integrated system provides complete and accurate information so that its information outputs will be useful for user daily jobs and relevant for decision making purposes.

2) Information Quality

Over the last decade, quality information research activities have increased significantly to meet the needs of organizations attempting to measure and improve the quality of information. DeLone (2004) highlights the importance of relevant, timeliness, and accuracy of information in the previous researcher study on the determinants of information system success.

Information quality refers to the quality of outputs the information system produces by DeLone & McLean (1992), which can be in the form of reports or online screens. Accuracy is an agreement with an attribute about a real world entity, a value stored in another database, or the result of an arithmetic computation. Consistency refers to an absence of conflict between two datasets, currency refers to up-to-date information. Meanwhile, completeness is defined with respect to some specific application, and it refers to whether all of the data relevant to that application is presented. Researchers have used a variety of attributes for information quality. According to Nelson, et al. (2005) researchers used the constructs of accuracy, completeness, currency, and format for information quality; the additional construct used by these authors is related to the presentation layout of information outputs. All five items used by DeLone &

McLean (2003) to measure information quality (accuracy, timeliness, completeness, relevance, and consistency) is included in our content dimension, except that timeliness is considered in our system quality construct as response time.

Information systems processing is similar to production processing in manufacturing organizations. If the information is not delivered on time and it does not conform to the needs of users, the users will be dissatisfied and the firm will lose its clients Gorla, et. al., (2009). For the high information content such as accurate, complete, and relevant information will lead to better product cost control and increased organizational efficiency. Data quality is part of the information quality in that poor data quality will result in poor information quality. Poor data quality, and poor information quality effects on organizations at operational, tactical, and strategic levels stated by Wong, et. al., (2009). At the operational level, user will be dissatisfied and employees will lack job satisfaction because of inaccurate or incomplete information.

At the tactical level, the quality of decision making will be adversely affected by irrelevant information. Selection and execution of a sound business strategy will become difficult because of inaccurate information. On the other hand, high information quality in terms of information content accuracy, completeness, relevance to decision making that will lead to high organizational impact in terms of explored information support in anticipating customer needs and internal organizational efficiency in high-quality decision making.

3) Service Quality

According to Grover, et. al., (1996) Service quality is defined as the degree of inconsistency between the service receiver's expectation of service and perceptions of actual service received. The concept of service quality has attracted increasing interest in the IS field along the emergence of the role of the IS unit in an organization with the advancement in personal computing in the last decade. The notion of IS services were not well-defined initially when IS departments were primarily regarded as system developers and operators. The role of IS departments as a service provider became more broadly recognized with the introduction of personal computers that facilitated higher interaction with users Pitt, et. al., (1995). A wide range of services, including installation assistance and technical help counters, was provided to meet the rising demands from the data warehouse users. According to DeLone (2003), the service quality properly measured, deserves to be added as components of IS success.

Service quality is increasingly being recognized as of key strategic value by organizations in both the manufacturing and service sectors Rashid & Jusoff (2009). The terms of customer service and service quality have become very important in a variety of fields such as industry, academia and government over recent decades, having taken on different meanings through the years.



According to Yavas, et al., (2004) have stated that service quality is at the root of user satisfaction and is linked to such behavioral outcomes as word-of-mouth, complaint and loyalty.

More than two year ago, Auka (2012) carried out comprehensive studies in different industries and developed the SERVQUAL instrument: service quality dimensions with a set of a 22-item scale to quantify a customer's appraisal of an organizations service quality. Five key dimensions of service quality such as reliability, responsiveness, empathy, tangibles, and assurance have identified and form the foundation on which many of other studies on service quality have been built. SERVQUAL is widely acknowledged and used, and it is considered as applicable to a number of industries, including the IS and information technology Delone (2004).

4) System Use

Quality of use is chosen to explain how the products are used to meet the needs of users who implied needs when used under specified conditions. This shifted the focus quality of a particular product separately for users of the product, the tasks and contexts in which they are used. The introduction of the product is to help users achieve specific goals they want, which means that the use of quality measures can be defined as (Quality use of measures: effectiveness, efficiency and satisfaction with specified users can achieve specified goals in specified environments). A product that meets the needs of users including, it is effective accurate and complete, efficient in use of time and resources and satisfying, regardless of specific properties that are present in the product. Quality of use is one way to apply this principle to be presented as a product that allows people to achieve it. The purpose of this standard is to ensure that the screen has the technical attributes required to achieve quality use. According to Chiu, et al., (2007) quality of use is determined not only by the product, but also by the context in which it is used: a particular user, task and environment. Quality use (measured as effectiveness, efficiency and satisfaction) are the result of interaction between the user and the product in the course of the technical, physical, social and organizational environment.

Surprisingly, little research has examined the relationship between use and user satisfaction. More research has examined the inverse relationship between user satisfaction and usage, so additional research is needed to assess the relationship. One study, research on expert systems at DuPont , found that use of the system, measured as the frequency of use, and user satisfaction , measured using nine items from Bailey and Pearson instrument , which is positive and significant Guimaraes, et al., (1996). In the context of knowledge management, Halawi, et al., (2007) identified that there is a significant relationship between intentions to use and user satisfaction. According to Seddon & Kiew (1996) found that, in the context of compulsory consumption, as measured by the system is vital, not related to customer satisfaction. According to Chiu, et al., (2007) identify that

there is a significant relationship between use and user satisfaction in the context of e-learning. However, Iivari (2005) found that in a study of medical information systems which use is mandatory, that usage is measured by the number of daily use and frequency of use was significantly related to satisfaction. At the organizational level, Gelderman (1998) found that mixed results significance in the correlation between different measures of system usage such as frequency, duration and user satisfaction. Although some researchers have argue that the use is not relevant when the system is mandatory. Iivari (2005) stated that it is possible to have enough diversity in the use of building to have a significant relationship with other constructs in the model D & M, such as user satisfaction.

THEORETICAL FRAMEWORK

Features of IS quality have been grouped by previous researcher into metrics such as system quality, software quality, data quality, information quality, and service quality. Of these, system quality and software quality are closely related as both relate to the technical aspects of a software system. Information quality, which is dependent on data quality, deals with the information content and presentation format provided to the stakeholders of a firm. Later, the researcher describe below the development of constructs used in this research for system quality, information quality, service quality and system use.

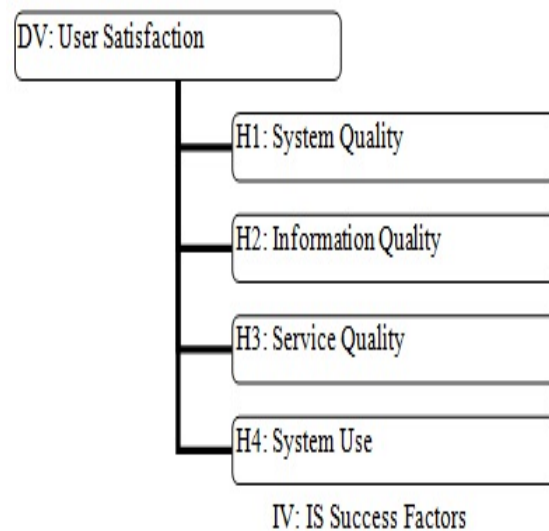


Figure-1. Theoretical Framework

Hypotheses Development

Based on the theoretical discussion and the construct derived in the previous section, hypotheses were drawn from the model in Figure 1 and tested. System quality, information quality, service quality and system use are determinants of user satisfaction. Therefore the hypotheses of this research are as follows:



H1: System quality is significantly related to user satisfaction.

H2: Information quality is significantly related to user satisfaction.

H3: Service quality is significantly related to user satisfaction.

H4: System Use is significantly related to user satisfaction.

The study will discuss the relationship between the dependent variables (user satisfaction) and the independent variable (System quality, Information quality, Service quality and System Use). The research conducted will show the theoretical framework used by the researchers. This will later show if there is any relationship between the IS success factor with the user satisfaction.

RESEARCH METHODOLOGY

The study adopted quantitative method to collect data and analysis. This study was carried out using a questionnaire survey approach to attain primary data for the purpose of analysis. A total of 100 respondents from the academic staff and student of UTeM based in Melaka, has been chosen as the target respondents and have been given a set of questionnaire each.

This research involved descriptive and hypotheses testing. The descriptive study was undertaken in order to understand the characteristics of the variables of interest in the study, whereas, the hypotheses testing was engaged to explain the nature of certain relationships in the study. The research was carried out using structured questionnaires.

The study was conducted in Universiti Teknikal Malaysia Melaka (UTeM). UTeM was chosen because it is a technical-oriented university that requires the lecturers and students to manage the university's information system like e-learning and UTeM Portal which covers largely of important information and tasks. A total of 150 sets of questionnaires were distributed to the academic staffs and students from the various department and faculty but only 100 respondents' answers were qualified to be analysed. Academic staffs and students are the main users in UTeM information system hence the reason they were picked as respondents.

RESULTS

A total of 100 questionnaires were collected from the respondents consisting of student and staff from various department and faculty in UTeM. The measure then was coded into SPSS version 20.0. Only questionnaire that passed the screening question were entered into SPSS. A total of 100 samples qualified and were then keyed in. Missing values were replaced with the mean value of the series and data was checked for error in keying in using frequency tables.

Demographic

Table-1. Demographic breakdown of respondents in UTeM.

Profile	Frequency	Percentage
Gender		
Male	61	61.0
Female	39	39.0
TOTAL	100	100.0
Age		
20-29	54	54.0
30-39	41	41.0
40-49	3	3.0
50-59	2	2.0
TOTAL	100	100.0
Educational Level		
SPM/ O-Level	2	2.0
STPM/ A-Level	6	6.0
Undergraduates	36	36.0
Master/ Postgraduates	29	29.0
PHD	27	27.0
TOTAL	100	100.0
Faculty		
Pendaftar	2	2.0
Perpustakaan	5	5.0
HEPA	9	9.0
FKE	11	11.0
FKEKK	2	2.0
FKM	12	12.0
FKP	5	5.0
FTMK	22	22.0
FPTT	31	31.0
PBPI	1	1.0
TOTAL	100	100.0
System Use		
Yes	95	95.0
No	5	5.0
TOTAL	100	100.0

Normality Test and Reliability Test

After examining the data collected, it is always advisable to conduct a test on goodness of the data collected. The reliability test was run to find out the consistency and stability of the measurement. Consistency discloses how well the items measuring a concept hang together as a set.

For this study, Cronbach's α was used to test the reliability coefficient. Cronbach's α indicates how well the items in a set are positively correlated to one another. It is computed in term of average inter correlation among the items measuring the concept. The reliability of a measure is established by testing for both consistency and stability. The closer Cronbach's α is to 1, the higher the internal consistency reliability.

**Table-2.** Reliability Test.

Variables	Cronbach Alpha
Independent variables	
System Quality	0.799
Information Quality	0.761
System Use	0.833
Service Quality	0.801
Dependent Variable	
User's Satisfaction	0.922

H1: Correlation between System Quality and User's Satisfaction.

It was hypothesized that positive relationship would exist between these two variables (H1). The result revealed a significant and positive relationship ($r = 0.811$, $N = 100$, $p = 0.00$). This result of the correlation indicates that higher system quality scores are associated with higher user satisfaction. Researcher accepts the alternatives hypothesis. There is strong positive relationship between system quality and user satisfaction.

Table-3. Correlation between System Quality and User's Satisfaction.

		System Quality	Satisfaction
System Quality	Pearson Correlation	1	.811**
	Sig. (2-tailed)		.000
	N	100	100
Satisfaction	Pearson Correlation	.811**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

H2: Correlation between Information Quality and User's Satisfaction.

It was hypothesized that a positive relationship would exist between these two variables (H2). The result revealed a significant and positive relationship ($r = 0.767$, $N = 100$, $p = 0.00$). This result of the correlation indicates that higher information quality scores are associated with higher user satisfaction. There is strong positive relationship between information quality and user satisfaction.

Table-4. Correlation between Information Quality and User's Satisfaction.

		Information Quality	Satisfaction
Information Quality	Pearson Correlation	1	.767**
	Sig. (2-tailed)		.000
	N	100	100
Satisfaction	Pearson Correlation	.767**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

H3: Correlation between Service Quality and User's Satisfaction.

It was hypothesized that a positive relationship would exist between these two variables (H3). The result showed a significant and positive relationship ($r = 0.837$, $N = 100$, $p = 0.00$). This result of the correlation indicates that higher service quality scores are associated with higher user satisfaction. Alternative hypothesis is accepted.

Table-5. Correlation between Service Quality and User's Satisfaction.

		Service Quality	Satisfaction
Service Quality	Pearson Correlation	1	.837**
	Sig. (2-tailed)		.000
	N	100	100
Satisfaction	Pearson Correlation	.837**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

H4: Correlation between System Use and User's Satisfaction.

It was hypothesized that a positive relationship would exist between these two variables (H4). The result demonstrated a significant and positive relationship ($r = 0.827$, $N = 100$, $p = 0.00$). This result of the correlation indicates that higher system use scores are associated with higher user satisfaction. There is strong positive relationship between system use and user satisfaction.

Table-6. Correlation between System Use and User's Satisfaction.

		System Use	Satisfaction
System Use	Pearson Correlation	1	.827**
	Sig. (2-tailed)		.000
	N	100	100
Satisfaction	Pearson Correlation	.827**	1
	Sig. (2-tailed)	.000	
	N	100	100

** . Correlation is significant at the 0.01 level (2-tailed).

Multiple Regressions

In this research, the standard regression model is used to examine the relationship between the whole set of predictors and the dependent variable. All five independent variables together explain 86.7% of the variance (R squared) in user satisfaction, which is highly significant.

**Table-7.** Model summary.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931 ^a	.867	.862	.1743

a. Predictors: (Constant), System Use, Information Quality, Service Quality,

System Quality

Table-8. Coefficients test for independent variables.

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.009	.140		.065	.948
	System Quality	.235	.067	.252	3.492	.001
	Information Quality	.082	.065	.086	1.266	.209
	Service Quality	.390	.053	.412	7.371	.000
	System Use	.296	.059	.306	5.054	.000

a. Dependent Variable: User Satisfaction

Based on the result of coefficients test in Table 8, there is an indication that System use, Service quality and System quality has significance difference with the user satisfaction. An inspection of individual predictors revealed that System Quality (Beta = 0.25, $p < 0.05$), Service Quality (Beta = 0.41, $p < 0.05$) and System Use (Beta = 0.31, $p < 0.05$) are significant predictors of user satisfaction. Higher level of Service Quality is associated with higher level of user satisfaction. This is related to hypotheses 3 (H3).

Nevertheless, the effect of all four variables on the user satisfaction is still significant ($p < 0.05$) and therefore hypotheses H1, H2, H3 and H4 are confirmed.

Bivariate Analysis

Table-9. Correlation coefficients among variables.

		System Quality	Information Quality	Service Quality	System Use	User Satisfaction
System Quality	Pearson Correlation	1				
	N	100				
Information Quality	Pearson Correlation	.807	1			
	Sig. (2-tailed)	.000				
Service Quality	Pearson Correlation	.637	.677	1		
	Sig. (2-tailed)	.000	.000			
System Use	Pearson Correlation	.742	.652	.675	1	
	Sig. (2-tailed)	.000	.000	.000		
User Satisfaction	Pearson Correlation	.811	.767	.837	.827	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	100	100	100	100	100

** Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, it shows the significant value in their relationship with dependent and independent

variable. The relationship between system quality and user satisfaction is $p = 0.00$, which mean there is significant relationship between them. Meanwhile, for the information quality, the value of p is also 0.00 and there is significant relationship between information quality and user satisfaction.

It followed by others variables which is service quality factor ($p = 0.00$), which researcher can conclude that there is significant relationship between service quality and user satisfaction. Lastly, the system use factor ($p = 0.00$) which also has significant relationship between the system use and user satisfaction.

CONCLUSIONS

This research was conducted to determine the impacts of IS success factors towards the user satisfaction in Universiti Teknikal Malaysia Melaka (UTeM). To determine the most relevant IS success factors that influence the user satisfaction (dependent variable) such as System quality, information quality, service quality and system use (independent variable). The hypotheses suggested were all valid, confirming that there is a positive relationship between the four independent variables with the user satisfaction. In order to develop the high user satisfaction, the information system department of UTeM should look into the entire factor that has significantly influenced the user satisfaction.

This study has provided some information to resolve the issues that have been raised. It is recommended that a more extensive research should be carried out to refine and improve the issue of this study.

To strengthen future studies, the researchers hope that the study will be conducted to identify other success factors across the universities around Malaysia. In addition, this study did not focus on institutions but also for future researchers to do the same study on the other organization out there. The main issue here is to determine user satisfaction.

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