The Students' Acceptability Model of the Web Based Academic Information System (SIAK)

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Abstract

A desirable integrated access to the information that affected to the organizations were, in facts, having the relationship with the perceptions to adopt the information system, especially that requires the technical competence and skills. This study investigated the using of Web-based academic information system to assist students in the academic activities. Specifically, on the behavior influenced to adopt the new information technology. Based on the developed information model towards academic system (Academic Information System Based on WEB, we called as SIAK), the study found that the user satisfaction (US) for academic purposes were having significant correlation with all of Net System Benefit. Here, the User Satisfaction (US) on whether happy or not towards the system is having significant correlation with all of System Quality (SQ), Attitude Towards Using (ATU), and Perceived Ease of Use (PEOU). Whiles, to the completeness of contents were having significant correlation with all of Perceived Ease of Use (PEOU) and Use Intentions (UI). This study also found that the users were very concern to the speed of information presented and provided by the system. The better quality of the academic information systems, the more satisfy the users to the information system.

Keywords: User's Behavior, Satisfaction, Technology Acceptance Model, Academic Information System

1.0 Introduction

According to Ghadirian et al.,(2014), the customers/ users' expectation need to be evaluated on whether they are tally or not towards the academic system. The expectations related to the academic system are the key to achieve customer satisfaction, and therefore will enhance students' education as the major reasons for the existence of higher educational institutions (Taiwo, 2010; Weerasinghe et al., 2017). In education, it is specifically related to the efficiency and complication level in accessing the academic system

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based on the utilization of information system (Shah, 2014). At least, the students may enjoy varying levels of experience with information technology (Aldridge & Rowley, 1998). This meant that where the information technology are available, it will influence over the student satisfaction and loyalty formation process (Alves & Raposo, 2010). In addition, since the image of a university is important to students, the university's image from both the outside community and their personal experiences within the university were therefore likely to influence their perceptions (Clemes et al., 2008).

The facts, there were many of the failures in information system development due to lack of understanding the ways people interact and work together (Gonçalves & Sapateiro, 2008). Specifically, towards a desirable integrated access to the information that is generally due to the organizations information and procedures measured (in terms of cost, quality, customer satisfaction, or shareholder value) as a continuum approaches to process change (Kettinger et al., 1997). Therefore, when the systems were introduced in an organization environment, the phenomenon of elementary parts need to be reformed to its function (Mele et al., 2010). First, in the context of learning procedure, there were multiple formats (that is not restricted to time space and place) as a new form of communications landscape through the advancing of technologies (which consists of a range of communication channels) where students will feels satisfy to various types of communication and collaborative learning (Hamre, 2008). Second, the perceptions to adopt the system for information required in which the technical competence and skill reflected the interactions and relationships of individual involved in the system with shared or collective use (Jeffries et al., 2017). Third, there were the relationship understanding between a proposed technology used for improving the unique needs against the organization to address individual's behavioral in using a new technology (Hamre, 2008).

Based on aforementioned, this study analyze the use of information technology implemented (Web-based academic information system, called as SIAK) to assist users (students) in the academic activities on what appropriate interventions required. Specifically, by the using of Technology Acceptance Model (TAM) approach related to the web-based academic information system related to the behavior influenced in adopting the new information technology systems.

2.0 Model of User Acceptability Towards System
2.1.1 Technology Acceptance Model (TAM)

The technological acceptance model (TAM) has been widely used to examine the behavior of individual towards the acceptance of technology in various types of information systems (Surendran, 2012). TAM is also the most widely used model in predicting the acceptance of information technology (Gefen *et al.*, 2003). The technological acceptance model focuses on two dimensions, such as the enrichment or extending the model from a theoretical perspective and the model performance with innovations in different environments (Tang & Chen, 2011). The TAM model derives from psychological theory to explain the behavior of IT users based on beliefs, attitudes, interests (intention) and the relationship of user behavior. and (Davis *et al.*, 1989). Here, the concept of technology adoption should refer to

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a process that includes people, technology and its implementation (Sargolzaei, 2017). Whiles, the purpose of this model is to explain the main factors of user behavior towards technology in the accepting the use of technology itself.

Explicitly, the purpose of this model is to explain the main factors of the behavior of information technology users related to the acceptance of the use of information technology itself. Çelik and Yılmaz, (2011) stated the technology acceptance model (TAM) is a very important modeling approach in information technology research. There are 5 (five) variables from TAM model such as the perceived ease of use (PEOU) perception, the perceived usefulness (PU), the attitude toward of using (ATU), the behavior to keep using (behavioral intention to use / ITU), and the actual system usage (ASU) conditions (Davis *et al.*,1989). The key goal of TAM is to provide a basis for tracking the impact of external factors on internal beliefs, attitudes and intentions.

Based on the perspectives of the strategic planning and management, Wills (2008) stated that this model identified the potential factors that contributed to the social influence of individuals and organizations that should be improved and optimized. Based on perceived ease of use (PEOU), Venkathesh and Davis (1996; 2000) underlined about the usage behavior, intention to use, perceived ease of use , perceived usefulness, subjective norm, experience , voluntariness, image, job relevance, output quality, result demonstrability. The indicators of perceived ease are easy to use information technology systems and comfortable working with technology systems. Whiles, the perceived usefulness is as a measurement to which the use of a technology is believed to bring the benefits to people (Davis *et al.*, 1989). This included the usability (the dimensions of making work easier, useful, increasing productivity) and the effectiveness (dimensions: effectiveness and job performance.

Furthermore, this model also considered the attitudes towards the use of systems in the form of acceptance or rejection is as an impact when a person uses a technology. This includes fun to use, good ideas, needed to support banking, wise idea, comfort interact, pleasure to use, enjoy the use, not boring (Davis *et al.*, 1989). In the case of technology, Gardner and Amoroso (2004) studied the variables in TAM based on group where the perceived usefulness and perceived ease of use were as independent variables. While in the case of web acceptance and usage model, Sanchez-Franco and Roldan (2005) proposed the measurement based on goal-directed and experiential web users. The actual use of the system is as the dependent variable, while the mediation variables is the attitude toward use and behavioral intention to use. The TAM model explains the acceptance of information technology in detail with certain dimensions that can affect easily the acceptance of information technology by the user (Chuttur, 2009).

2.1.2 Model DeLone-McLean

DeLone and McLean Model (1992) developed the Information Systems Success based on DeLone and McLean Model of Information System Success (D & M IS Success). This model is to measure and analyze on how much the successful of a system towards user satisfaction. Laudon and Laudon (2014) stated the model to measure the success of information systems using 5 variables, such as high level of system use, user satisfaction on system, positive attitude (favorable attitude) of the user to the system, achievement of

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objectives information system (achieved objectives), and financial returns (financial payoff). Since the influences to the users of the system will determine user satisfaction and impact on individuals and organizations, there were good system quality and information quality demonstrated the benefits of system output that can affect to the system's intended use and user satisfaction. Based on this perspective, the better of the quality of the system (*e.g.* the speed in accessing, and the usefulness of the output system), the system users will feel satisfied with the system services because of the user re-use the system (DeLone & McLean, 1992). Therefore, the high benefits perceived by users of the system will result in satisfaction with usage.

McGill *et al.*, (1992) commented that the use of information systems developed refers to how often users apply the information system based on the benefits and level of learning (degree of learning) to the system. In this context, the variables and the relationship between training and performance is as the adoption of a learning-oriented training to enhances performances through its positive effect on organizational learning (Aragón *et al.*, 2014). Therefore, the increasing degree of learning is as one indicator of the system influenced on the quality of the user (individual impact) and organizations. First, this meant that the individual impact relates to the influence of existed information systems and their performance use, decision making, and degree of individual learning within the organization. Second, the reaction can be the emergence of new motivations to compete and improve performance. This meant that the existence of information systems will be stimulus and challenges for individuals in the organization to work better with respect to organizational impact.

DeLone and McLean (1992) suggested the measurement towards information system with D&M IS Success Model. They identified 6 dimensions such as system quality, information quality, user satisfaction, intensity of use, individual impact, and organizational impact. There were as follows:

- *Quality system* and *Quality information* is to determine the attitude of the user as the recipient of information. Whiles, the use of systems and information that has an influence on users and systems will determine the user satisfaction and impact on individuals. Here, information quality is as perceived information quality (Komiak & Ilyas, 2010; Nicolaou *et al.*, 2013). The measurement carried out should be therefore accurate, timeliness, precise, reliable, actual, complete, and concise, relevance, adequate, understood, free of bias, comparable, and measureable (Wang & Strong, 1996; Bailey & Pearson, 1983; Ives *et al.*, 1983; King & Epstein, 1983).
- *System Quality* is as the performance of the system that refers to how well the hardware, software, policies, and procedures of the information system developed to provide the information required by the user. Since the quality of system used is the quality of the perceived system quality and the measurement on quality system is subjective to the user (Duggan & Reichgelt, 2006) , the measurement of the information systems in terms of quality should be, therefore, based on the proposed data currency, response time, turnaround time, data accuracy, reliability, completeness, system flexibility, ease of use, convenience of

access, integrity of the system, flexibility of the system, error recovery, language (Bailey & Pearson, 1983; Livari, 2005; Urbach & Müller , 2012).

- *Quality of Service* (Service Quality) is as a function of the customer expectations versus perceptions. This is as a comparison in the real service where there are 3 components affected to the quality of service (service quality) such as assurance (quality assurance) given system, empathy (system empathy) to the user, system responsiveness to actions performed by the user (DeLone & McLean, 2004). The factors to measure service quality are tangible, reliability, fidelity (responsiveness), assurance, empathy, rapid responsiveness, assurance, empathy), following-up service, reliability, responsiveness, assurance, empathy (Parasuraman *et al.*, 1985)

- *Usage* is as the output of an information system used by the user (Seddon, 1997). The concept of use of a system can be seen from several perspectives, namely actual use, and use of prescription. The factors to measure usage related to direct use, frequency of use, duration of time, real use, motivation (Davis *et al.*, 1989; DeSanctis & Poole, 1994).

- *User Satisfaction* is as the response and feedback from users after using the information system. The user's attitude towards the information system is a subjective criterion of how well the system is used (Robey, 1979; Guo and Zhang, 2010). The factors to measure user satisfaction with the system used were related to fun, satisfaction, accuracy, content, and format (Doll & Torkzadeh, 1988; Heilman & Brusa, 2006; Reynolds, 2007; Marakarkandy, & Yajnik, 2013).

- *Net Benefit* is as an advantage perceived by users towards the system (individual and organizations) after implementing the information systems. The related impact factors to individuals and organizations to enhance the service support, knowledge, customer experience, reduced information retrieval and shopping costs, entertainment, real-time marketing offers (DeLone & McLean, 2004;. Raghunathan & Madey, 1999; Hernandez *et al.*, 2009).

2.2 Information Systems

The information system allows the users to better understand the context of decision made where impact is to improve decision-making productivity (Karim, 2011). Here, the impact resulted is the changes of user activity, as well as perceptions of the importance of information systems (organizations readiness for change) (Weiner, 2009; Sacer & Oluic, 2013). Whiles, to the organization is the quality performance of information system based on the intensity of users to the systems (the existence and usage of information system) and the sense of satisfaction arise from the information used to improve the performance of individuals and organizations (Nicolaou *et al.*, 2013; Arvidsson *et al.*, 2014). Also, it can be a value is as an integrated system to support management operations within an organization to provide useful information for its users (Adeoti-Adekeye, 1997). This meant that the information should be accurate, timely and relevant based on information system development strategy. Therefore, the attitude of the users' need to be considered (in the form of acceptance or rejection) as the impact of a person

using a technology in their work (Fishbein & Ajzen, 1975), behavior or attitude towards behavior (Davis *et al.*, 1989), user evaluation (Mathieson, 1991).

Zhou *et al.*, (2013) stated that attitude factor is as one of the aspects that affect individual behavior. The variables measured were related to efficiency, effectiveness and overall satisfaction with the system (satisfaction). Here, the ease of use perception to a technology is towards a person's understanding of technology. Thus, the characteristics of the information embedded in the system itself is the quality of a combination of hardware and software (DeLone & McLean, 1992). Specifically, Maditinos *et al.*, (2008) underlined about general attributes of a website which having an effect on information quality, system quality, security-privacy and eventually on user satisfaction. This statement regarding the user satisfaction is also discussed by DeLone and McLean (1992), Seddon and Kiew (1994), Livari (2005), Roldan and Leal (2003).

Since the user perceptions of the services provided are positively related to satisfaction, loyalty, and user behavior, Parasuraman *et al.*, (1985) commented that the measurement of user satisfaction is, however, necessary and useful towards the quality of service provided in terms of perceptions versus expectation. Based on this reason, Ketinger and Lee (1994) emphasized the neccesary of validity and reliability of the instruments towards two variables used for the measurement that are mutually exclusive and complementary. Since the quality of information has an influence on user satisfaction, Myers, *et al.*, (1997) stated the quality of services were also a reflection of the quality system. Here, the user of the information systems will shows their behavior based on the decision made in using the system (Davis, 1989).

Based on the success model of DeLone and McLean (2004), the model shows that the user satisfaction will tend to increase the intensity of the system if the quality of the system and information provided is better. The use of this system related to the application or the use of information systems on whether mandatory or voluntary. This meant that a technology used will be said successful if it is acceptable (which is indicated by the desire to wear and leads to use). Here, Davis (1989) emphasized the basic model of technology acceptance based on the use of technology and its impact on individuals. This meant, system usage has a positive influence on the net benefits between usage and individual impact (Almutairi & Subramanian, 2005; Livari, 2005; Wang & Liao, 2008; Wang *et al.*, 2007). According to McGill and Klobas (2009), how often users apply the information systems will have an influence on the increasing levels of learning (degree of learning) the users regarding the information systems. The increasing degree of learning is, therefore, as one indicator of the existence system influenced on the quality towards the user (individual impact and organizational performance). The weaknesses of the process in the context of system implementation, Vaughan (2000) stated about the level of acceptability related to people, funds, and vitality. Whiles, Levin and Datnow (2012) underlined about the systematically qualitative simulation models required in capturing the qualitative data towards the accuracy evaluation.

3.0   Methodology

Figure 1 showed the study carried out to assess the developed of Academic Information System Based on WEB, we called as SIAK in Higher Education Institution as a case study. This study proposed the model based on the *Technology Acceptance Model* (TAM) (blue color) and DeLone and McLean model (red color), while the orange color related to Demography (Figure 2).

The proposed model need to be validated in the prelimanary test. The samples taken for the preliminary test is 30 respondents, while the developed model developed refers to 16 hypotheses based factors related to the successful of technology acceptance.

The test conducted through the questionnaires developed will then be used for main survey. In this step, the study distributed the survey questionnaires to 400 respondents on whether they were influenced by the technology developed or not. Whiles, the analysis conducted towards the collected data also need to be checked for its reliability and validation to ensure on whether the model is tally or not towards the successful purpose of acceptance model related to technology developed.
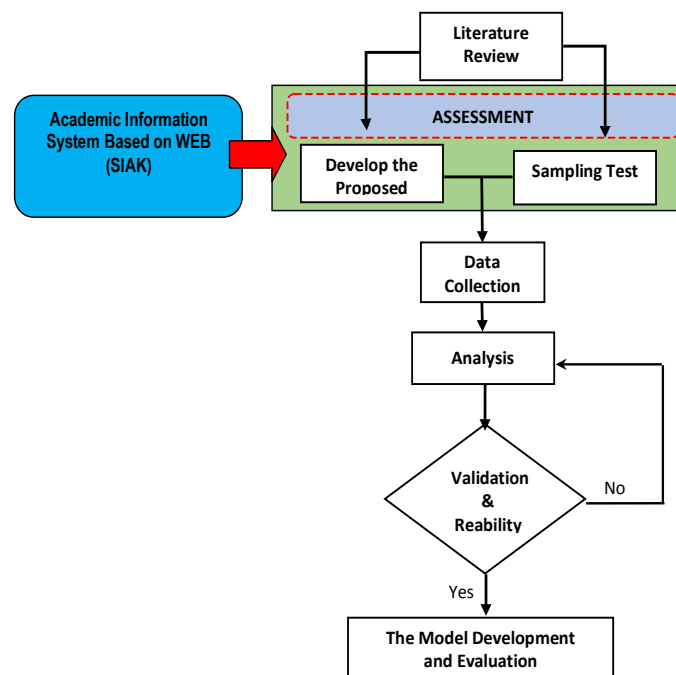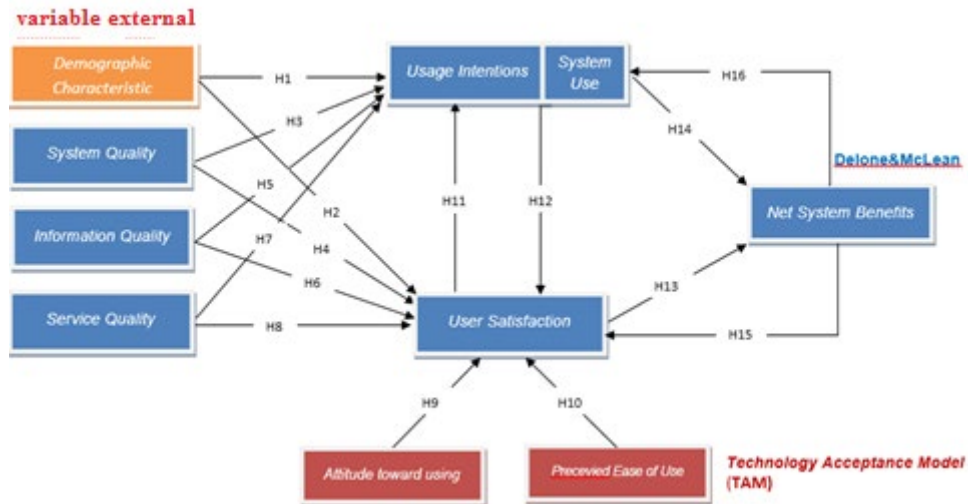
Figure 1: The Methodology Flows

Figure 2: The Proposed Model of Acceptance of the Technology Developed

4.0   Data And Analysis
4.1   Model Analysis Proposed

This study utilized the generated analysis model based on multiple linear regression analysis (SEM) against the influence factors of independent variables (that consist of Demographic Characteristic (DC), Information Quality (IQ), Attitude Toward Using (ATU),Service Quality (SV), System Quality (SQ), Perceived Ease of Use (PEOU) , Use Intentions (UI) , and User Satisfaction (US) and the dependent variable (*i.e.* Net System Benefit or NSB) (Figure 3).
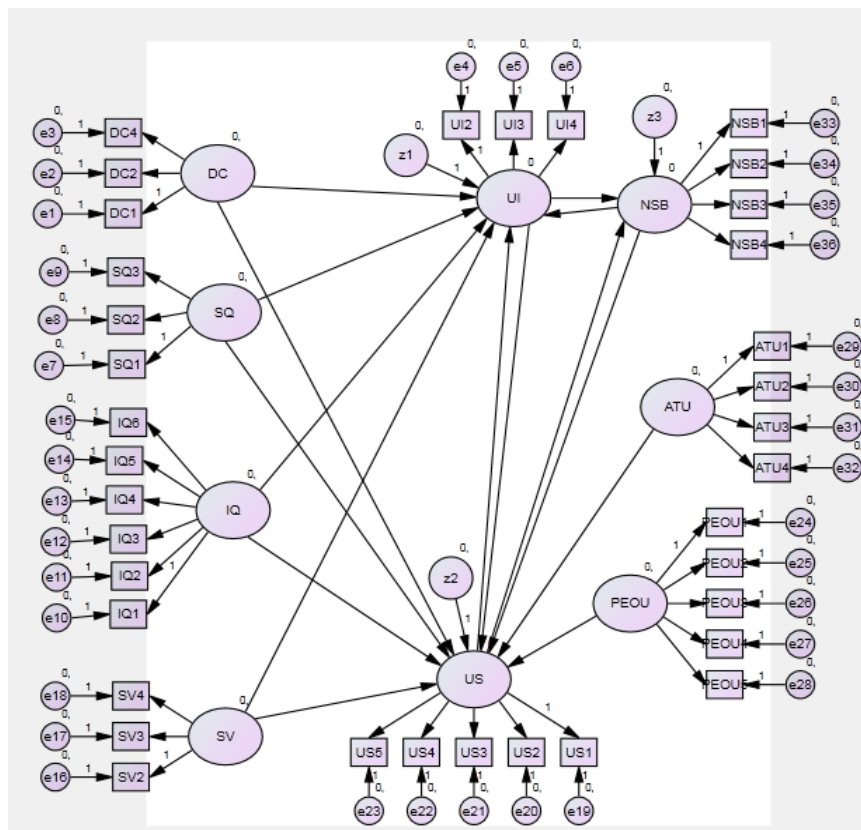

Figure 3: Model Analisi Proposed for Multiple Regression Test

4.2 Main Survey

The respondents involved in this study are the degree level students of HEI (Higher Education Institution) in Bandung city. There were 400 respondents that consists of 237 male or 61.88% and 146 female or 38.12%. Table 1 showed there were no correlation at all existed between as follows:

- The benefit of system related to the performance productivity increased using SIAK (NSB1) towards System Quality (SQ), Information Quality (IQ), Attitude towards Using (ATU), and Use Information (UI).
- The benefit of system in terms of the system provides the information that I need (NSB2) towards Demography (DC), Information Quality (IQ), Perceived Ease of Use (PEOU) and Use Intention (UI).
- The benefit of system in terms of the system provided access speed in presenting information (NS3), the user thought that there were any correlation existed towards Service Quality (SV), Attitude Toward Using (ATU), and Use Intentions (UI)
- The benefit of the system on whether useful or not for academic services and organizational activities (NSB4) against demography (DC), System Quality (SQ), Information Quality (IQ), Attitude Toward Using (ATU), Perceived Ease of Use (PEOU), and Use Intentions (UI).

Table 1: The Correlation between Net System Benefit (NSB) versus Demography (DC), System Quality (SQ), Information Quality (IQ), Service Quality (SV), Attitude Towards Using (ATU), Perceived Ease of Use (PEOU), and Use Intentions (UI) and User Satisfaction (US).

Net System Benefit	Demography (DC)			System Quality (SQ)			Information Quality (IQ)						Service Quality (SV)		
	DC1	DC2	DC4	SQ1	SQ2	SQ3	IQ1	IQ2	IQ3	IQ4	IQ5	IQ6	SV2	SV3	SV4
NSB1		-.134**											-.121*		
NSB2				.104*	.153**									.117*	
NSB3			.150**	.100*	.197**							-.107*			
NSB4														.106*	

Net System Benefit	Attitude Toward Using (ATU)				Perceived Ease of Use (PEOU)					Use Intentions (UI)			User Satisfaction				
	ATU1	ATU2	ATU3	ATU4	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	UI2	UI3	UI4	US1	US2	US3	US4	US5
NSB1							.105*	.113*					.106*	.120*	.127*	.218**	.305**
NSB2				.103*									.124*	.165**	.118*	.439**	.447**
NSB3									.153**				.146**	.190**		.362**	.414**
NSB4																.230**	.197**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Moreover, the significant correlation existed to the benefit of system in terms of the performance productivity using SIAK (NSB1) and The system provides the information I need (NSB2) were on User Satisfaction (US1, US2, US3, US4, US5).

The facts, the benefit of the system related to access speed in presenting information (NSB3) is , however, having negative significant correlation to the

easiness to understand the SIAK (IQ6) (-.107, p<0,05). This is parallel when the productivity performance with SIAK (NSB1) is also having negative significant correlation to the system provides good service to the users (SV2) is (-.121, p<0.05). This meant that the user very concerns to the speed in presenting information and the provided system existed in SIAK.

Table 2 showed there were significant correlation existed (p<0.01) between as follows:

- The user satisfaction (US) towards System Quality related to the service technology and the speed of the SIAK response (SQ2), comfortable and easy in using the system (SQ3), repair facility provided in case of system error (SQ4), besides the service feeling related to secureness in accessing or sending data through the system (SV3)
- The user satisfaction (US) towards Attitude Toward Using related to the feeling of comfortness when interacting with SIAK (ATU4).
- The user satisfaction (US) towards the Perceived Ease of Use related to how easy to study SIAK (PEOU1), the feeling of easy and not to become proficient in using SIAK (PEOU3 and PEOU4), and feeling the comfortness in using SIAK as an academic service (PEOU5)
- The user satisfaction (US) towards the Use Intentions related the duration to access the system (UI2) and the easier to obtain information using SIAK (UI3).
- The user satisfaction (US) due to SIAK precision (US1) and the data and information (US2) were having significant correlation with all the demography characteristics (DC), System Quality (SQ), Service Quality (SV), Perceived Ease of Use (PEOU) and Use Intentions (UI). Whiles, the user satisfaction due to happy with the system (US3) is having significant correlation with all of System Quality (SQ), Attitude Towards Using (ATU), and Perceived Ease of Use (PEOU). However, the user satisfaction due to the completeness of the contents of SIAK (US4) is having significant correlation with all of Perceived Ease of Use (PEOU) and Use Intentions (UI).

Table 2: The Correlation between User Satisfaction (US) versus Demography (DC), System Quality (SQ), Information Quality (IQ), Service Quality (SV), Attitude Towards Using (ATU), Perceived Ease of Use (PEOU), and Use Intentions (UI).

User Satisfaction	Demography (DC)			System Quality (SQ)					Information Quality (IQ)					
	DC1	DC2	DC4	SQ1	SQ2	SQ3	SQ4	SQ5	IQ1	IQ2	IQ3	IQ4	IQ5	IQ6
US1	.119*	.150**	.387**	.212**	.362**	.316**	.482**	.338**	.196**	.223**	.138**		.262**	.116*
US2	.133**	.151**	.489**	.297**	.498**	.263**	.266**	.179**	.150**	.178**	.120*		.278**	.176**
US3		.100*	.268**	.320**	.374**	.371**	.137**	.230**	.199**	.125*			.203**	
US4			.113*		.208**	.144**	.113*	.110*	.144**		.173**	.215**		
US5			.170**	.112*	.177**	.167**	.158**			.167**	.142**	.152**	.114*	

User Satisfaction	Service Quality (SV)			Attitude Toward Using (ATU)				Percevied Ease of Use (PEOU)					Use Intentions (UI)			
	SV2	SV3	SV4	ATU1	ATU2	ATU3	ATU4	PEOU1	PEOU2	PEOU3	PEOU4	PEOU5	UI2	UI3	UI4	SV2
US1	.175**	.336**	.120*		.322**	.159**	.119*	.306**	.358**	.329**	.414**	.429**	.539**	.468**	.257**	.175**
US2	.106*	.269**	.206**		.412**	.260**	.191**	.158**	.395**	.241**	.353**	.499**	.333**	.352**	.209**	.106*
US3		.162**	.288**	.303**	.372**	.499**	.457**	.226**	.379**	.211**	.369**	.331**	.252**	.181**	.374**	

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US4	.117*	.117*		.112*	.214**	.198**	.136**	.290**	.152**	.155**	.222**	.189**	.105*	.117*
US5	.135**	.183**	.116*		.161**	.163**		.185**	.131*	.212**	.229**	.248**		.135**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

By employing the hypothesis generated refers to the developed model, this study utilized statistical approach using *t* test to determine on whether the independent variables partially affect to the dependent variable or not (Figure 4). This study found that the independent variables have the significant correlation to dependent variable, t_{count} value> t_{table} with Sig value <0.05. In this study, there were found that the variables of Demography (DC) to User Satisfaction (US), Net System Benefit (NSB) to Use Intentions (UI), and Net System Benefit (NSB) to User Satisfaction (US) were not significant.
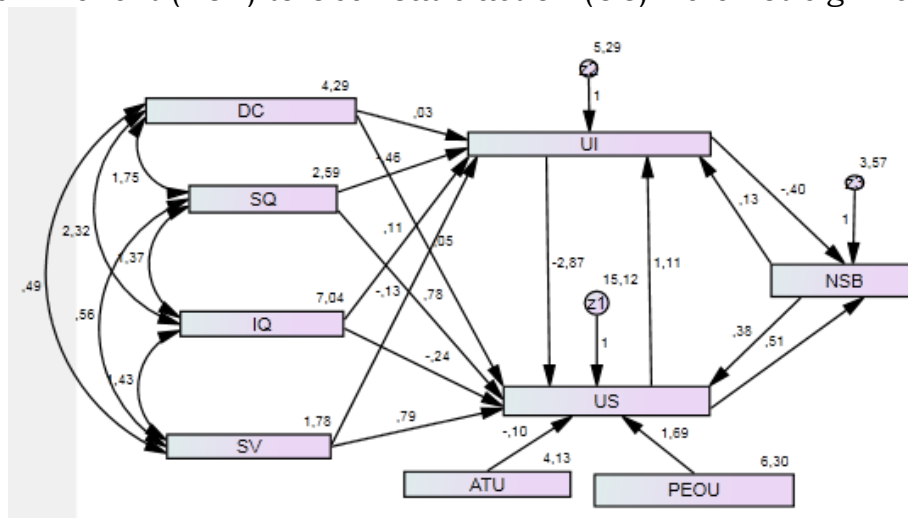

Figure 4: Model Accuracy Test

Moreoever, it is necessary to test the accuracy index of the developed model by considering the cut-off values of the model accuracy indices in SEM, such as minimum value of the discrepancy function C (CMIN), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). Based on the model accuracy test result in table 3 (where the CMIN value is 482.377 , *df* is 14, and the *p* value is 0.000 <0.05), there were no significant difference found between the sample and the population at a real 5% level. This study found that the data is not fit since the value of CMIN / DF is 34.456> 5.

Table 3: The Model Accuracy Test Result

CMIN Value Model Accuracy					
Model	NPAR	CMIN	df	P	CMIN/DF
Default model	31	482.377	14	.000	34.456
Saturated model	54	.000	0		
Independence model	9	1369.044	36	.000	38.029

Index Accuracy Index					
Model	CFI	RMR	GFI	AGFI	RMSEA
Default model	.649	1.165	.800	.357	.296

CMIN Value Model Accuracy					
Model	**NPAR**	**CMIN**	*df*	**P**	**CMIN/DF**
Saturated model	1.000	.000	1.000		
Independence model	.000	1.567	.456	.321	.311

AIC Value Model Accuracy				
Model	**AIC**	**BCC**	**BIC**	**CAIC**
Default model	544.377	546.044	666.766	697.766
Saturated model	90.000	92.419	267.662	312.662
Independence model	1387.044	1387.528	1422.577	1431.577

Table 3 showed the index accuracy value of the model is good, since the values of GFI and CFI closed to 1 (shows that the model used is fit with the data). Due to the RMSEA value is 0.296< 0.8, the model has been accepting to the data for the large number of samples. Whiles, for the AIC value used to determine the accuracy of the model, the AIC value is considered fit because of the values in the model proposed (Default Model) is smaller compared to the value of the Independence model. This meant that the models can be considered fit with existing data.

Based on above analysis carried out, the final model based on accuracy test (where some of unqualified variables are removed), the hypothetical model developed according to the results (main survey) shown in Figure 5.
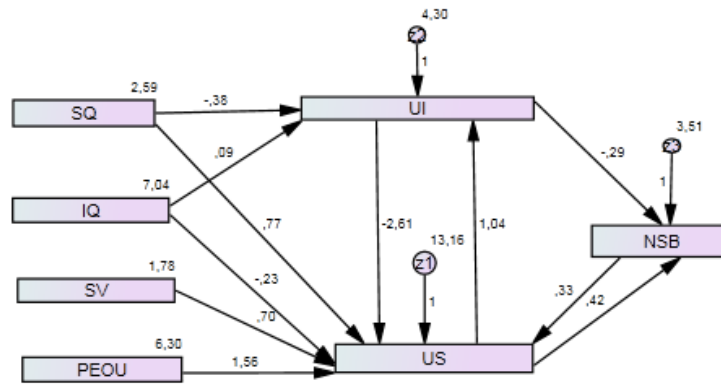

Figure 5: The Final Model Based on Accuracy Test

New values of CMIN, CFI, RMR, GFI, AGFI, and RMSEA showed in the table 4. Since the value of CFI and AGFI were between 0 to 1, this meant that the final developed model based on hypothesis were having a good level of accuracy and fit.

Table 4: Final Model Accuracy Model Value

Model	**NPAR**	**CMIN**	**DF**	**P**	**CMIN/DF**
Default model	18	424.879	10	.000	42.488
Saturated model	28	.000	0		
Independence model	7	1025.834	21	.000	48.849

Model	**CFI**	**RMR**	**GFI**	**AGFI**	**PGFI**	**RMSEA**
Default model	.587	1.305	.946	.290	.267	.330
Saturated model	1.000	.000	1.000			
Independence model	.000	1.643	.497	.330	.373	.354

Thus, the final developed model (Figure 6) showed that the relevant factors considered in this study were System Quality (SQ), Information Quality (IQ), Service Quality (SV), Perceived Ease of Use (PEOU), User Satisfaction (US), Use Intentions (UI), and Net System Benefit (NSB). Based on this developed model, this study found that there were two no significant factors found refers to the existing data results, such as Demographic Characteristics (DC) and User Attitude or Attitude Toward Using (ATU) and also not significant relation between Service Quality (SV) to Use Intentions (UI) and Perceived Ease of Use (PEOU) to User Satisfaction (US).
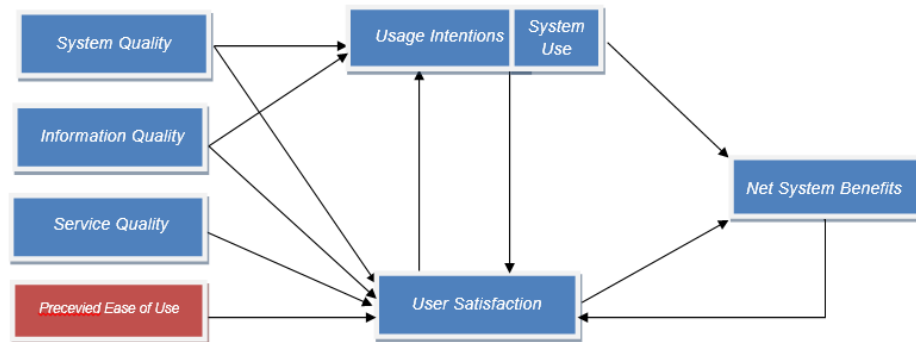

Figure 6 The Final Model

5.0 Conclusion

Every university urgently required to improve their service to students. One of their services is on how to utilize their information systems as the usefull technology for the information systems implemented in Higher Education. Through the using of adequate information systems, this techology should accelerate services to students and will have to influence on the level of user satisfaction. However, since information system versus user satisfaction applied by a University is inseparable from the quality of the information system and the information generated by the system itself, it is in facts will greatly determine on whether the user of the system is satisfied or not.

In this study, we found that the user satisfaction (US) related to the completeness of the contents of SIAK (US4) and the information presentation format given in SIAK (US5) were having significant correlation with all Net System Benefit (NSB). Whiles, the user satisfaction due to happy with the system (US3) is having significant correlation with all of System Quality (SQ), Attitude Towards Using (ATU), and Perceived Ease of Use (PEOU). In addition, the user satisfaction due to the completeness of the contents of SIAK (US4) is having significant correlation with all of Perceived Ease of Use (PEOU) and Use Intentions (UI).

In addition, the finding showed that the user very concern to the speed in presenting information and the provided system existed in SIAK. The better quality of the academic information systems and information applied is parallel to the increasing level of user satisfaction of the information system. Since this study employed the measurement based on survey using questionnaires distributed, further research is still required through the measurement based on direct interviews related to the perceptions, besides by incorporating other relevant factors that have significant influences to the implementation of information systems that affect to the quality of system.

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