



© Copyright Kemala Publisher
All rights reserved

Science, Engineering and Social Science Series
ISSN/e-ISSN: 2541 – 0369/2613 – 988X
Vol. 4, No. 6, 2020, Printed in the Indonesia

DeLone Model Assessment and McLean Information Success System Over Esa Unggul University Website

Irawati¹, Tantri Yanuar R Syah¹

¹Department of Economic and Management, Esa Unggul University, Jakarta

User satisfaction is the impact of a good information system. Here, user satisfaction can be influenced by several factors such as system quality, information quality, and user intensity. Thus, in this study aims to test and provide the empirical evidence also analyze the effect of system information quality and user intensity at user satisfaction. Here, we used a SEM model and used AMOS 23 to obtain the results. The result shows system quality has no effect on user intensity while information quality affects user intensity. Here, user intensity has no effect on user satisfaction due to system quality has no effect on user satisfaction. In addition, information quality has no effect on user satisfaction.

Keywords: System quality, information quality, user intensity, user satisfaction

1. INTRODUCTION

The technology advances in digital era have penetrated all of the fields as well as a pattern of community life which is already relatively advanced. Web-based information systems can be used as a digital media to increasing information. This utilization will facilitate a job such as processing data faster, making decisions more precisely, saving costs and time. Several studies related to the quality of information systems were carried out on the intensity of using the performance of the system which refers to how well the capabilities of the hardware, software, policies, procedures of the information system can provide information on the needs [1]. System quality is also defined as a perceived ease of use which is how much information system technology is felt to be relatively easy to understand and use [2, 3]. The improving system quality that needs attention is the ease-of-use factor [4]. The poor quality of the system can reduce the user's a desire to access the information system which results in reduced frequency of access to the information system [5]. The Previous research shows that system quality has no significant effect on system use [6, 7, 8]. One of the research factors of Information Quality on Intensity of Use is a quality of information in an information system shows as semantic success. This semantic level is the success of information in conveying the expected meaning or meaning. Here, a significant association between information quality (information

quality) and intensity of use [9]. The user is satisfied with the quality of information from a system it will encourage users to use the information system and there will be repeated use of the system in the future so that it can be increase the intensity of use of the system [10]. A quality of information has a positive and significant effect on the intensity of use [11, 12, 13]. Here, the quality of information does not have a significant effect on the intensity of use [14]. System Quality on User Satisfaction can be measure using the information processing on system itself [15]. The focus is on the performance of the system, which refers to how well the capabilities of the hardware, software, policies, procedures of the information system can provide information on user needs [16]. The quality of the information system can be seen from the software's ability to produce information in accordance with the wishes of its users. Therefore, the quality of the information system is the main signal in measuring the level of satisfaction of the end users of an application [17]. A system quality has a positive and significant effect on User Satisfaction does not have a significant effect on User Satisfaction. Here, the Information Quality on User Satisfaction Information quality is the quality of output in the form of information generated by the information system used information quality and can be defined as measuring the quality of the content of an information system [18, 19]. Information quality is the level at which information has content, form, and time characteristics, which give it value for

*Email Address: iraja63@gmail.com

certain end users [20]. The better the quality of information, would be more appropriate decisions. If the information produced don't have a high information quality, it will have a negative effect on user satisfaction of information systems. The Information Quality has a significant effect on User Satisfaction. Thus, information Quality has no significant effect on User Satisfaction [21, 22, 23]. Here, Intensity of Use to User Satisfaction should precede user satisfaction in terms of the process, but a positive experience with using the system will encourage greater user satisfaction in terms of causality [24]. Likewise, an increase in user satisfaction will encourage to increase the intensity of use of information systems. The use of the system is related to who uses it (who use it), the level of use, the attitude of accepting and rejecting an information system. The use of the system cannot meet user needs, user satisfaction will not increase and future use will not be realized [25]. Thus, the intensity of Use has a significant effect on User Satisfaction due to Intensity of Use does not have a significant effect on User Satisfaction.

Furthermore, system is a group of components which have mutually related work together to shortly achieve a common goal by accepting inputs and produce outputs over transformation process [26]. In another definition, the group system is a integrated elements with the same intention to achieve a goal [27]. The system has 3 (three) components of the base are mutually namely catch input and gather elements that enter the system to be processed. The change process can be converts input into output includes the displacement of elements produced by the change process into the final destination. Furthermore, the information system is a basic need that must be met by an organization to maintain its survival. Here, information system is a series of formal procedures where data collected, processed into information, and distributed to users. The criteria of the information system (among others user) are flexible, effective and efficient. Thus, the application of system information (SI), the organization will be more competitive because it will get many benefits from the sophistication of SI.

Theory of Reasoned Action (TRA) was developed by to deals with the attitudes and behavior of individuals in carrying out activities or actions that are reasoned in the context of using SI [28]. The advantage of SI on the grounds that the technology will produce benefits for user. In addition, the Technology Acceptance Model (TAM) was developed due to offers a basis for obtaining a better understanding of user behavior in acceptance and use of SI [29]. TAM believes that use SI will increase the performance or effectiveness of individuals or organizations, in addition to the use of SI is easy and does not needs effort from users. A power that supports an opinion or an attitude while the meaning of intensity in English is intensity which means the quantitative aspect

of feelings in which interest and attention are involved along with awareness that accompanies an activity or someone's experience [30]. Here, intensity is the strength or depth of an attitude towards something. Intensity can be said as a form of one's attention and interest based on the quality and quantity designated by the individual [31]. Furthermore, the intensity or the number of activities carried out can be seen from the frequency [32]. Thus, user satisfaction is the response and feedback generated by the user after using the information system. The user's attitude towards information systems is a subjective criterion regarding how much the user likes the system used. The noise forming satisfaction namely Match expectations is a level of conformity between product performance expected by consumers and perceived by consumers while Interest in returning to visit is a consumer's willingness to visit again or make a re-purchase of a product or service. Thus, a willingness is Recommend for products they have felt to friends or family.

2. METHODOLOGY

A. Relationship of System Quality to Intensity of Use

The improvement in system quality that needs to be considered is the ease-of-use factor [33]. The poor quality of the system can reduce the user's desire to access the information system which results in reduced frequency of access to the information system. Here, a system quality has no significant effect on system use [34, 35].

H₁: A good quality system will increase the intensity of use.

B. Relationship between System Quality and User Satisfaction

The quality of the information system can be seen from the software's ability to produce information in accordance with the wishes of its users. Therefore, the quality of the information system is the main signal in measuring the level of end user satisfaction of an application [36]. Thus, a system quality has a positive and significant effect on customer satisfaction.

H₂: Good system quality will increase user satisfaction.

C. Relationship of Information Quality to Intensity of Use

There is a significant association between information quality and intensity of use. The increasing the trust of users of information systems is expected to further improve their performance. Here, a quality of information has a positive and significant effect on the intensity of use while a quality of information does not have a significant effect on the intensity of use.

H₃: Good quality information will increase the intensity of use.

D. Relationship of Information Quality to User Satisfaction

The better the quality of information, would be more appropriate decisions anyway. If the information produced is not of high quality, it will have a negative effect on user satisfaction of information systems. Here, the information quality has a significant effect on customer satisfaction [37, 38].

H₄: Good quality information will increase user satisfaction.

E. Relationship between Usage Intensity and Usage Satisfaction

The easy use of a system related to who uses it level in the attitude of accepting and rejecting an information system cannot meet user needs [39]. Here, user satisfaction will not increase and future use will not be realized. Thus, the usage Intensity has a significant effect on Customer Satisfaction on User Satisfaction [40].

H₅: Good use intensity will increase user satisfaction.

3. RESULT AND DISCUSSION

In order to achieve the result, we proposed a new causal design. Here, causal design is a research that is useful for analyzing the relationship between one variable and another. Furthermore, this design is use a quantitative approach based on primary data collection from a survey method by distributing questionnaires to 140 respondents. This study we use Structural Equation Modeling (SEM) to determine the relationship and influence between variables. The Structural Equation Modeling (SEM) is an analytical technique that allows testing a series of relationships simultaneously over conceptual framework model (see Figure 1).

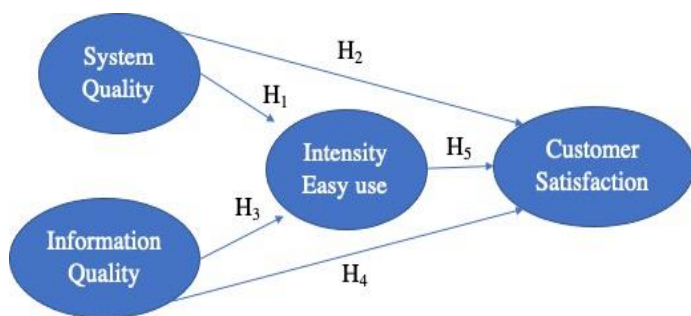


Figure 1. Conceptual Framework Model

A. Research variable

The variables involved in this study are system quality, information quality, user intensity as the dependent variable and user satisfaction as the independent variable (see Figure 2).

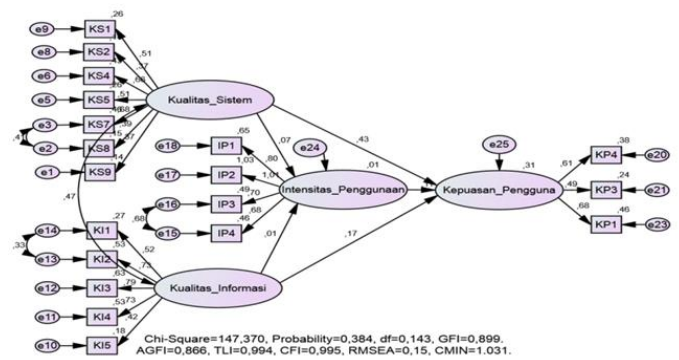


Figure 2. Structural Equation Model (SEM)

Hypothesis testing shows the influence and significance level between the test variables. The level of significance is seen through the P Value with the assumption that if the P Value <0.05, it is said to be significant and said to be insignificant if the P Value is ≥ 0.05 and the value of the construct reliability (CR) > 1.96 then the hypothesis can be accepted. After testing the hypothesis, it is known that 1 in 5 hypotheses have a significant positive relationship while 4 hypotheses are proven insignificant. This research refers to previous research and existing theories (see Table I).

Table I. Final Test Estimation Results

Assessment Variable	Estimation	S.E.	C.R.	P
Intensity easy use <--- System quality	,113	,180	,627	,531
Intensity easy use <--- Information quality	,013	,272	,049	,961
Customer Satisfaction <--- System quality	,701	,309	2,268	,023
Customer Satisfaction <--- Information quality	,440	,365	1,204	,228
Customer Satisfaction <--- User intensity	,116	,107	1,081	,280

B. Quality system doesn't increase the intensity of use.

Based on the results of testing at the above hypothesis, it was found that data analysis does not support the hypothesis H₁ is the quality of the system affect the intensity. Based on this estimation result can be seen that the quality system can be applied over Esa Unggul University website but does not increase the intensity of use.

C. System quality does not improve user satisfaction.

The results of testing on this hypothesis, it found that the results of the analysis that support the H₂ hypothesis, namely the quality of information has an effect on user satisfaction, meaning that the better the quality of the system provided by Esa Unggul University, the more satisfied the user will be, conversely the worse the quality of the system provided, the user does not feel satisfied.

D. The quality of information that is either going to increase the intensity of use.

Based on the results of the statistical research above, the intensity of use has an influence on the intensity of use. This means that the high and low intensity of use at Esa Unggul University will affect the intensity of use. Good information has a very good impact on users' desire to continue to visit the website to get information about Esa Unggul University.

E. Information quality does not increase user satisfaction. Based on the results of testing this hypothesis, it was found that the results of data analysis did not support the H₄ hypothesis, namely the quality of information had no effect on user satisfaction, the conclusion was that the quality of information had no effect on user satisfaction. The quality of information available on the Esa Unggul University website does not provide satisfaction to website users.

F. Intensity of use does not increase user satisfaction.

Results of testing this hypothesis, it was found that the analysis results do not support the hypothesis H₅ is intensity use of influence over customer satisfaction, meaning that quality systems have no effect on user satisfaction. Although the website is frequently visited, it does not increase user satisfaction.

G. Managerial Implications

The information can be said to be accurate if can be provide or say information in accordance with existing and appropriate facts. Information is data that has been processed into a form that has meaning for the recipient and has real value, so that it can be used as a basis for making decisions, and is felt for current decisions or future decisions. Accurate means thorough, precise, accurate. To get accurate information that needs to be considered are; (i) Ask the local security or security guard, not just anyone who is passing by; (ii) Conformity between information needs and the information we are looking for (obtained) It could be that the sources of the information we use are accurate (in the sense of reliable and accountable sources), but the information we get will be inaccurate; (iii) The process of transferring information from source to recipient. The process of transferring information can be through seeing, reading, listening, or feeling. To be able to get accurate information, each of these functions must work well. It could be that the source and suitability of information needs have been met properly, but the transfer process is not running according to standards.

4. CONCLUSION

The study of DeLone Model Assessment and McLean Information Success System Over Esa Unggul University Website has been successful. Here, we conclude that the five proposed hypotheses (four hypotheses that are rejected and one hypothesis that is accepted) namely the hypothesis (H₃) the effect of service quality on customer satisfaction. The limitations of this study can be taken into consideration for further research. This study we used 140 respondents while in the previous study using more respondents, in this study using AMOS 23 it is expected that in subsequent studies using more sophisticated analysis tools, namely LISREL, SMART PLS and others.

The large number of questionnaires caused respondents to get bored of seeing so many questions, finally the respondents did not really answer the questions from the questionnaires that were given. The desired information cannot be extracted because respondents are not serious about filling out the questionnaire. The limitation of the writer in knowing the best time for the respondent to gather information is also a factor in the limited information obtained

Based on the research that has been done. Some suggestions that can be taken into consideration and input for the management of the Esa Unggul University website, namely the lack of updated information, the management of the Esa Unggul University website should always update news or information about news. Esa Unggul University website users do not miss the latest information which is too long to be opened by visitors when they first enter the website and the lack of speed of transfer of access on the Esa Unggul University website page. Recommendations that can be given are that website managers must pay attention to server usage, and optimize existing resources on the server properly, because this can affect the speed of website access as well as in loading its pages.

References

- [1]. Ali, Bejjar Mohamed and Boujelbene Younes. (2013). "The Impact of Information Systems on user Performance: An Exploratory Study". Journal of Knowledge Management, Economics and Information Technology. Issue. 2
- [2]. Alla, Majed Mustafa Suliman Oun and Qais Faryadi. (2013). "The Effect of Information Quality in E-Learning System". International Journal of Applied Science and Technology. Vol. 3 No. 6.
- [3]. Andriani, Desy. (2017). "Analisis Efektivitas Sistem Informasi Aplikasi JITU RTGS". Tesis. Magister Manajemen Universitas Budiluhur.
- [4]. Ayyash, Mohannad Moufeed. (2015). "Identifying Information Quality Dimensions That Affect Customers Satisfaction of e-Banking Services". Journal of Theoretical and Applied Information Technology. Vol. 82 No. 1.
- [5]. Bossen, Claus., Lotte Groth Jensen., and Flemming Witt Udsen. (2013). "Evaluation of a Comprehensive EHR Based on the DeLone and McLean Model fo IS Success: Approach, Result, and Success Factors". International Journal of Medical Informatics. Vol. 82.
- [6]. Brown, I., dan R. Jaykody. (2009). "B2C eCommerce Success: a Test and Validation of a Revised Conceptual Model". University of Cape Town, South Africa. Vol. 12 No. 2.
- [7]. Chhikara, Tejvir Singh and Ankit. (2015). "Information Quality - Crucial Aspect of E-Commerce". IOSR Journal of VLSI and Signal Processing. Vol. 5 Issue. 3.
- [8]. Davis, F.D. (1989). "Perceived Usefulness, Perceived Ease of Use, and Acceptance of Information System Technology". MIS Quarterly. Vol 13. No 3.
- [9]. Bagozzi, R.P., and Warsaw, P.R. (1989). "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models". Management Science. Vol 39. No.8.
- [10]. DeLone, W.H. and E.R. Mc Lean. (2003). "The DeLone and Mc Lean Modul of Information System Success : A tenyear up date ". Journal of Management Information Systems. Vol. 19 No. 4.
- [11]. Dreheeb, Abdulhakim Elmoawe., Nurlida Basir., and Norasikin Fabil. (2015). "Impact of System Quality on Users' Satisfaction in Continuation of the Use of e-Learning System". International Journal of e-Education, e-Business, e-Management and e-Learning. Vol. 6 No. 1.

- [12].Fendini, Dian Septiayu., Kertahadi dan Riyadi. (2013). "Pengaruh Kualitas Sistem dan Kualitas Informasi terhadap Kepuasan Pengguna (Survey pada Karyawan Pengguna Aplikasi Pelayanan Pelanggan Terpusat (AP2T)". Jurnal Ilmu Administrasi. Vol. 2 No. 1.
- [13].Floropoulos, J., C. Spathis, D. Halvatzis, dan M. Tsiouridou. (2010). "Measuring the success of the Greek Taxation Information System". International Journal of Information Management. Vol. 30.
- [14].Hall, James A. (2001). *Sistem Informasi Akuntansi*. Edisi Ketiga. Jakarta: Salemba Empat.
- [15].Hansen, D.R. and Mowen, M.M. (2006). *Akuntansi Manajemen*. Edisi 7. Salemba Empat : Jakarta
- [16].Irantto, Bondan Dwi. (2012). "Pengaruh Kepuasan Pengguna Sistem Informasi terhadap Kinerja Individu (Studi pada PT. PLN (Persero) Distribusi Jawa Tengah dan DIY)". Tesis. Magister Manajemen Universitas Diponegoro.
- [17].Istianingsih dan Setyo Har Wijanto. (2008). "Pengaruh Kualitas Sistem Informasi, Perceived Usefulness, dan Kualitas Informasi terhadap Kepuasan Pengguna Akhir Software Akuntansi". Simposium Nasional Akuntansi XI.
- [18].Jiradilok, Taweerat., Settpong Malisuan., Navneet Madan., and Jesada Sivaraks. (2014). "The Impact of Customer Satisfaction on Online Purchasing: A Case Study Analysis in Thailand". Journal of Economics, Business and Management. Vol. 2 No. 1.
- [19].Jogiyanto, H.M. (2007). *Model Kesuksesan Sistem Teknologi Informasi*. Penerbit Andi : Yogyakarta.
- [20].Kristiono dan Henky Honggo. (2010). "Analisis Pengaruh Kualitas Informasi Website Terhadap Minat Beli Ulang Pelanggan Belanja Online". Jurnal Ilmu Administrasi. Vol. 1 No. 5.
- [21].Kutlu Busra dan Asil Alkaya. (2015). "Measuring the DeLone and McLean Model of Information System Success Applied to Banking Sector of Turkey". International Journal of Advanced Computational Engineering and Networking. Vol. 3 Issue. 8.
- [22].Lee, K. C., dan N. Chung. (2009). "Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective". Interacting with Computers. Vol. 21.
- [23].Mahmoodi, Zohreh., Sara Esmaelzadeh-Saeieh., Razieh Lofti., Monir Baradaran Eftekhari., Mahnaz Akbari Kamrani, Zahra Mehdizadeh Tourzani and Katayoun Salehi. (2017). F1000Research. Vol. 6 No. 1.
- [24].Masa'deh, Ra'ed., Ali Al-Badi., Alaa Abu-Hlalah., Rozan Alkhal., and Sarah Zytoon. (2017). "Factors Affecting User's Satisfaction of Tourism Board Website and Its Impact on Continuous Intention to Use". International Journal of Business Administration. Vol. 8 No. 4.
- [25].Mastan, Ignatius Adrian dan Wing Wahyu Winarmo. (2013). "Evaluasi Tingkat Kepuasan Pengguna Sistem Informasi Cyber Campus (SICYCA) dengan Model DeLone dan McLean (Studi Kasus: STIKOM Surabaya)". Jurnal Sistem Informasi. Vol. 3 No. 1.
- [26].Mawarni, Aprilliandani Hatria dan Afiat Sadida. (2015). "Analisis Faktor yang Mempengaruhi Tingkat Keberhasilan Sistem Aplikasi Lelang Email ALE (Studi Kasus pada Kantor Pelayanan Kekayaan Negara dan Lelang (KPKNL) Semarang)". Prosiding Setrinov. Vol. 1
- [27].McLeod, Raymond. (2001). *Management Information System-Sistem Informasi Manajemen*. Edisi 10. Salemba Empat : Jakarta.
- [28].Monika, Ruth and Ford Lumban Gaol. (2017). "Measuring the Success of E-Cargo Implementation at One of Indonesian Airlines using DeLone and McLean Model". Materials Science and Engineering. Vol. 215.
- [29].Muharor, Lalu Afghan., Busaini., dan Nur Fitriah. (2015). "Determinan Kesuksesan Aplikasi SIA Komdanas pada Satuan Kerja di Koordinator Wilayah Pengadilan Tinggi Mataram". Jurnal InFestasi. Vol. 11 No. 2.
- [30].Nwone, Simeon Ambrose. (2014). "Exploratory Study of Information System User Satisfaction: A Study of University of Ibadan Post Graduate School Web Portal". International Journal of Computer and Information Technology. Vol. 3 Issue. 6.
- [31].O'Brien, J. A., and Marakas, G. M. (2010). Introduction to information systems. New York: McGraw-Hill
- [32].Oktapiani, Renny dan Dwiza Riana. (2016). "Kajian Model Kesuksesan Sistem Informasi DeLone & McLean pada Wifi.id di Kotamadya Sukabumi". Jurnal Swabumi. Vol. 4 No. 2.
- [33].Pujani, Vera dan Eri Besra. (2009). "Model Penggunaan Website E-Commerce di Indonesia: Analisa Kualitatif dan Kuantitatif". Artikel Ilmiah Hibah Bersaing.
- [34].Putra, Donny Setiawan Hendyca., Ady Seosetidjo., and Saiful Bukhori. (2017). "Penerapan Path Analysis Kualitas Informasi terhadap Kepuasan Pengguna dan Intensitas Pengguna dengan Metode Delone & McLean di Rumah Sakit Paru Jember Tahun 2017". Jurnal Kesehatan. Vol. 5 No. 2.
- [35].Sacer, Ivana Mamic and Ana Oluic. (2013). "Information Technology and Accounting Information Systems' Quality in Croatian Middle and Large Companies". Information Technology and Accounting Journal. Vol. 37 No. 2.
- [36].Seddon, P.B and Kiew. (1996). "A Respecification and Extension of the DeLone and McLean Model of IS Success." Information System Research. Vol. 2 No.11.
- [37].Sherifi, Idaver. (2015). "Impact of Information System in Satisfying Students of The University: Case Study From Epoka University". European Journal of Business and Social Sciences. Vol. 4 No. 4.
- [38].Simatupang, Patar dan Akib, Haedar. (2007). "Potret Efektivitas Organisasi Publik: Review Hasil Penelitian". Manajemen Usahawan Indonesia. No 01.
- [39].Suryanto, Tri Latif Mardii., Djoko Budiyanoto Setyohadi., and Asif Faroqi. (2016). "Analysis of The Effect of Information System Quality to the Intention to Reuse of Employee Management Information System (SIMPEG) Based on Information System Success Model". MATECH Web Conferences.
- [40].Tella, Adeyinka and Isah Abdulmumin. (2015). "Predictors of Users' Satisfaction with E-payment System: a Case Study of Staff at the University of Ilorin, Nigeria". Organizacija. Vol. 48 No. 4.
- [41].Wahyudi, Farid., Harianto Respati., and Yusaq Tomo Ardianto. (2017). "Study on DAPODIK Information System: User Satisfaction as Mediation of System Quality and Information Quality on Net Benefit". Information and Knowledge Management. Vol. 7 No. 7.
- [42].Widodo, Agus., Honorata Ratnawati Dwi Putranti., Nurchayati. (2016). "Pengaruh Kualitas Sistem Aplikasi dan Kualitas Informasi terhadap Kepuasan Pengguna Sistem Aplikasi RTS (Rail Ticketing System) dengan Kepercayaan sebagai Variabel Mediasi". Media Ekonomi dan Manajemen. Vol. 31 No. 2.
- [43].Widodo, Tri Wahyu., Siti Ragil Handayani., dan Muhammad Saifi. (2013). "Pengaruh Aplikasi Sistem Informasi Manajemen (SIM) terhadap Kinerja Karyawan". Jurnal Profit. Vol. 7 No. 1.
- [44].Yim, Sunjip and Minsoo Shin. (2014). "Effects of System Quality and Information Quality on the Use and Job Performance of an Enterprise Mobility Solution for a Mobile Office with a Consideration of Task Mobility and Task Interdependence as Control Variables". Vol. 24 No. 2.
- [45].Zeng, Wanxian and Alex Richardson. (2015). "The Role of Translated Information Quality in a Global eRetailing Context". Australasian Conference on Information Systems. Adelaide, 2015.

Received: 30 October 2020, Accepted: 23 December 2020