

Husni Teja Sukmana<sup>1</sup>  
Kyung Oh Lee  
Taqwa Hariguna  
Munawaroh

**Article info:**  
Received 21.10.2020  
Accepted 20.01.2021

UDC – 005.06  
DOI – 10.24874/IJQR15.02-10



## THE INFLUENCE OF E-QUALITY, INCIDENT AND QUALITY MANAGEMENT ON THE TRAINING STIMULATION OF GOVERNMENT EMPLOYEES IN INDONESIA: MODERATING ROLE OF QUALITY INFORMATION SYSTEM

**Abstract:** *The ongoing study objective is to examine the role of e-quality along with incident management and quality management on the training stimulation of government employees in Indonesia. The investigation of the moderating role of quality information system among the links of e-quality, incident management, quality management and training stimulation of government employees are also included in the objectives of the study. The quantitative method has been executed by the study through which data has been collected by using questionnaires and analyzed by using smart-PLS. The results reported that e-quality, incident management and quality management have a positive association with training stimulation of government employees. The findings also reported that quality information system has positively moderated among the links of quality management and training stimulation of government employees while negatively moderated among the links of e-quality and training stimulation. These findings are guided to the regulators along with government employee trainers that they should focus on the quality management of the e-learning system of the employees that enhance not only the training stimulation but also improve the firm performance.*

**Keywords:** *E-quality; Incident management; Quality management; Training stimulation; Quality information system.*

### 1. Introduction

The modern world is dependent upon the use of information technology and its applications (Ivanović-Đukić et al., 2019). Quality of information systems is very important for the prosperity of the country. In Indonesia specifically, the government institutions and cell phones related companies emphasized on the use of modern information technology in their all departments (Pérez,

Telfer, & Ross, 2003). Customer relationship management and performance or quality management strategies are necessary for all these purposes. The basic qualities of an Information system are (i) It should provide the best quality management purposes (ii) It should be rapid in incident management and (iii) It should provide ease of e-quality operation. All of the above-mentioned qualities help in the processing of the information system and help in the training

<sup>1</sup> Corresponding author: Husni Teja Sukmana  
Email: [husniteja@uinjkt.ac.id](mailto:husniteja@uinjkt.ac.id)

simulation of modern days systems either they belong to cell phone-related industry or for hospitality management purposes (Jovanović, 2016).

The information technology gadgets are becoming more popular nowadays because of the current pandemic situation (ALSarayreh, Jawabreh, ALkharabsheh, & Aldahamsheh, 2011). These gadgets are not only easy to use and access but are also quite helpful in the betterment of world relations. Here, we are discussing the government institutions of Indonesia by using the applicability and training simulation of the GIS system. This system is quite helpful in the betterment of government institutions of Indonesia (Fajuyigbe, Balogun, & Obembe, 2007).

Here, we use the GIS (Geographical Information System) application in the marketing of government institutions sites in Indonesia. Government Institutions can be promoted by GIS as it helps in marketing, planning and management of public relations and customer management. Any incident can be easily managed by correct indication of the geographical region by this system (Al-Rousan & Mohamed, 2010). The proper use of the information system in government institutions is imperative because it uses the internet which has no geographic boundaries. The local government institutions can use the geographical information system to provide the services at a low and affordable cost. They can indulge themselves in the mainstream by using the Geographical Information system (Tsai & Chen, 2011).

The problems related to information and access to foreign lands and places of people's attraction can be solved in this way. This system provides a solid and diverse channel to exceed the proper information attractively. The revenue earned through government institutions can be increased magnificently by the use of geographical information system i.e. In Indonesia, tourism-based revenue comprises a total of 6% of GDP. So, this can be easily increased by the use of modern technology (Tecim, 1997).

The applications of tourism-related marketing by the use of information technology systems are quite diverse. These systems allow the marketing countries to explore new sights and new customers to work with. The use of information technology also helps in providing information about other destinations which compete. He should also search for the other destinations which tourists can find more attractive than that site he wants to advertise. Then he can easily improve the facilities are cost-related properties of that specific site (Goossen, Meeuwssen, Franke, & Kuyper, 2009). Other advantages are also there. The automation and easy to use applications can be designed which every single person can use to search for specific government institutions related sites. These systems are also accurately providing the direction to reach a specific location with accuracy (Mohammad, B 2010). This thing can save the time of tourists as they can easily use the mobile phone and government institutions sites to reach their destination. The ease of access can not only save their time but is also helpful in lessening their tensions about route and chances of being lost is nullified with this system (Sadoun & Al-Bayari, 2009).

The quality information systems can easily be used to search each and every point of a specific city. The city of Petra is voted as one of the new Seven Wonders of the World. This system can help the tourism and foreign relations related industries to attract more tourists by utilizing the time-saving approaches and they can also provide assistance to the foreigners by introducing new and promising packages to them (Ibrahim K Bazazo & Hasoneh, 2010). With the help of government institutions, they can also welcome the tourists by simply using specific units and even they can provide discounts on their visits. These marketing and advertising strategies can be marketed worldwide by the use of a geographical information system.

The modern world is full of mobile phones and other smart devices. The ease to download apps is also a blessing in this regard. The government institutions and archaeological sites are usually more attractive to tourists and it can be said without any doubt that the city of Petra is one of the most historical and old sites of Indonesia (Wahab, Nor, & Khaled, 2010). The tourists can be attracted more effectively if the government institutions and archaeological experts collaborate with tourism department officials and software developers because it will be very helpful to attract more tourists from foreign countries. In this regard, things can become easier and even become more profitable (Khouli et al., 2011).

The government institutions information system or database can also be used by the tourism development authorities in determining the sites where more people are interested in the specific tourist place (Luna-Reyes & Gil-Garcia, 2011). This can be helpful in marketing specifically those regions where more people are attracted towards their region. The whole scenario shows that the expertise in operating these systems is very important. Government institutions released a proper map of all the locations should be maintained. The experts from all fields like government institutions, geographical experts, software developers, engineers, archaeologists and all those professionals who could easily read and apply all the tools easily in applying the whole system. These experts can be trained on the university level (Steadman & Huang, 2012).

There are some shortcomings as well which were encountered by the researchers during their whole study. They concluded that those officials who manage all the tourism-related decisions and planning were inefficient and unable to understand the importance of information technology and its tools applicability for the betterment of the tourism industry. They have very small scale set-up in this regard to broadcast and communicate with the whole world. The technological constraints were also there (Scott et al., 2011).

The archaeological management authorities were also reluctant to share and collaborate the sensitive information publicly. The people as well as the government institutions authorities were unaware of new and advanced technological gadgets and were unable to understand the strategies which were described by the IT professionals (Ibrahim Kahlil Bazazo, Alananzeh, & Taani, 2016). They try to implement most simply but people were still unable to respond efficiently. That is why tourism and geographical information related software's cannot be connected easily and effectively to make the industry better.

The need of the hour is that every individual should properly understand the importance of information technology and should able to operate the technology-related applications. The government institutions and technology experts should keep in mind while designing the software that they should be understood and easily operated by the layman. The people from the government institutions IT section should make proper notes of the SOPs and the whole guidebooks should be available in hard copy on all the desks so that if someone suffers from any shortcoming or technological problem he can easily coordinate with those notes. However, it cannot be said that these government institutions information systems can be effectively implemented in a day or so. The implementation and proper application need a lot of time, understanding and collaboration from government institutions and other departments to facilitate and make betterment in the best possible way.

## 2. Literature Review

Government sectors in any country are the backbone of its overall structure and development. The better working of these organizations determines its better developing position at international level (Young, 2000). The superior performance of any organization is dependent on its efficient planning, proper control, quality based

policies, strategies, their implementations, and above all the quality of their human resources. In this piece of literature, we are concerned with the performance of government organizations dealing with the training simulation in employees. Proper future planning and better control of the organizations' activities are possible only in the presence of employees being trained and educated constantly. Evolution must be brought in the policies and strategies of government institutions whether these are legislation institutions or educational sector or even financial organizations (Adams, Buetow, & Rossen, 2010). Proper innovative policies and strategies can be built and implemented in the presence of quality management, incident management and e-quality that improve the training simulation in organizations' faculty.

In Jordan government is making arrangements for the training simulation in its organizations. Recent analysis has proved that the government organizations where training simulation has been introduced are showing better results than others (Khasawneh, Jalghoum, Harfoushi, & Obiedat, 2011). In such institutions practices of quality management, incident management is undertaken and employees are trained via electronic technology. They are trained how to make policies and strategies to promote the particular institution, how to render quality based services, how to face the problem, how to deal with the changing conditions and how to adopt a polite behavior to deal with others in assembly, contracts and other operation (Nimri, Bdair, & Al Bitar, 2015). They are trained how to make right decisions at the right time which is the basic need of the hour. If the wrong decision is made at the right time it would be just a waste of time. Similarly, if the right decision is made but at the wrong time, it would be quite useless. Generally, government employees are lazy in their working as they are sure to have a salary in time whether they are working or not. So, there should be proper accountability and proper check and balance upon their

performance that is possible if the activities of incident management are undertaken (Alawneh, Al-Refai, & Batiha, 2013). In electronic quality control, the quality of products and services is gone through electronically instruments like sensors. In this way, their quality is judged. If there is any loop in quality there make a change in procedures and policies which conveys the training simulation.

Proper implementation of the practices of quality management, incident management and planning and analysis of the quality of services and products through e-quality impart positives impacts on training simulation in employees (Yoo, Kim, & Sanders, 2015). These practices stimulate employees to show responsibility by implementing policies and taking the right decisions at the right time. In Jordan, there is also working a quality information system in most of the government organizations. This system helps the organizations to have useful information and knowledge not only at national but also at the international level. Such a system is useful for training simulation in working faculty in government organizations. It is also helpful in the working of quality management, incident management, and e-quality (Marimon, Petnji Yaya, & Casadesus Fa, 2012). Thus it strengthens the impacts of quality management, incident management, and e-quality on training simulation in working faculty in government organizations.

No doubt, quality management is the recently introduced phenomenon but it's significant for an organization as it urges the employees to show responsibility in performing their official duties. It's important for the training simulation of government employees. It breaks down hurdles among several departments. There are some important principles of quality management (Endrullat, Glökler, Franke, & Frohme, 2016). Quality management focuses on the need to fulfil the ever-changing requirements of the customers and it struggles to give better quality of services and products than customer

preferences thus confidence can be maintained is in public (Zelnik, Maletič, Maletič, & Gomišček, 2012). Training simulation is needed for better performance of employees and maintenances of confidence in public thus quality management influences the training of employees. Quality management strengthens favorable atmosphere among leaders as it creates unity among their purposes. It creates competence and power in employees to engage in such a way as to improve the capability to give quality based services (Sadikoglu & Zehir, 2010). Thus, it creates teamwork capability in employees. It helps to train the employees to make procedures efficient so they give consistent and predictable results. It also helps to train them to make better decisions about the quality of their services. Based on the above discussion the following assumption has been developed.

**H1:** The practices of quality management positively contribute to the training simulation in the employee of public organization in Indonesia.

Incidents are the consequences of the failure of the services or service interruptions. It creates problem-solving skills in them. It's an IT service management procedure area the primary purpose of the practices of incident management is to save normal business service operations from loss (Khattak, Wang, & Zhang, 2012). It ensures the rendering of services as soon as possible. It makes the responsiveness of operations to the constantly changing preferences from customers. It not only helps to solve problems and hurdles in IT services but it is also useful to minimize the negative impacts of these problems and hurdles on normal business services operations. Undertaken to minimize such incidents, removes the failures and service interruptions as soon as possible without any negative effects on normal business operations and delivery of services. Thus it develops the competency of quick decision making in employees which is also a part of their training simulation. Its procedures create

ability in managers to deal with the failures and interruptions and minimizing their harmful impacts on service quality and business operations. Incident management plans to detect, record communicate, the incidents (Songchitruksa & Zeng, 2010). It helps to train how to investigate and analyze the service interruption, how to understand the nature and causes of failures and hurdles in rendering quality services (Peng, Zhang, Tang, & Li, 2011). It urges the government employees to make quick problem-solving decisions which put positive impacts on the performance of government organizations.

**H2:** The practices of incident management positively contribute to the training simulation in the employee of public organization in Indonesia.

Electronic quality helps to control the quality of products and services. In electronic quality modern technology is used to create better quality in products and services, to maintain their quality, to evaluate and judge their quality (Gengler et al., 2010). When modern Electronic technology is used to check the quality of products and services there are minimum chances to find any fault in their quality. It urges the managers to improve their managerial capabilities regarding the quality of the services rendered by them. The analysis of the operations of government officials in Jordan and valuation of their services shows the significance of electronic quality. As the faults in quality of services can be easily detected in electronic quality the government official has minimum chances to shirk from work and to show any lack responsibility as their faults can be easily detected (Kaienburg, Rau, & Kirchartz, 2016). Thus it forces them to be trained properly to provide better quality based services. On the hand, modern technology is used to train them officially according to up to date circumstances and to boost up their quality instincts to perform their duties in a better way. They are also trained to use up to date technology to produce better quality goods and to render high-quality services (Nicolaou, Ibrahim, & Van Heck, 2013).

Hence proved electronic quality imparts strong influences on the training simulation as it arouses technical awareness in government officials and motivates them to work in a team to maintain the quality of service. Thus, hypothesis has been presented:

**H3:** The implementation of e-quality positively contributes to the training simulation in the employee of public organization in Indonesia.

The implementation of principles of quality information system positively affects the training simulation along with quality management in government employees. In Jordon, in government institutions, quality management along with quality information system makes it sure that the services of the organizations are consistent (Kim, Kumar, & Kumar, 2012). It has four basic components quality based planning, quality based assurance, quality based control, and quality based improvement. The focus of quality management and quality information system is not only on the quality of products and quality of services but also on the manners how to achieve this quality. E-quality along with quality information system assures the quality of the procedures used in organizations and controls them. Incident management and quality information system improves the quality of the products and services and makes the quality consistent (Bastas & Liyanage, 2018). The quality of the services in a government organization is determined by rules and regulations set by the government according to the need of the public. The quality of the services rendered by government employees can be judged by the fact in how well manner the needs of the public or customers are met. The training simulation of the employee depends on the incident management and quality information system of the organization. Thus, the present study has formulated the following hypotheses:

**H4:** Quality information system moderated the links among the quality management and

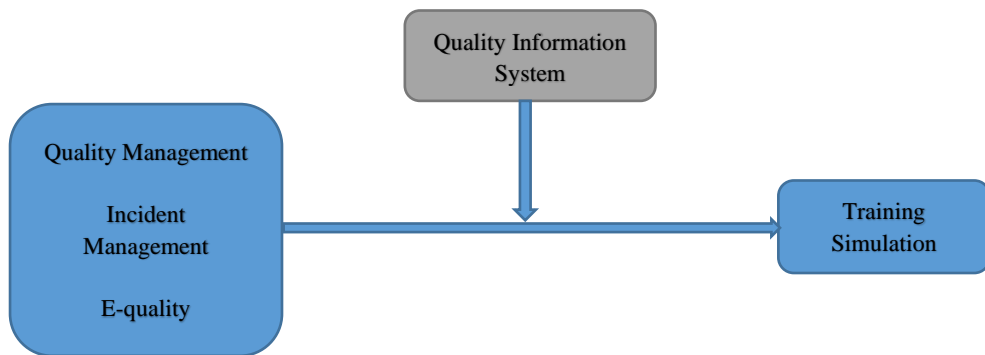
training simulation of the government employees in Indonesia.

**H5:** Quality information system moderated the links among the incident management and training simulation of the government employees in Indonesia.

**H6:** Quality information system moderated the links among the e-quality and training simulation of the government employees in Indonesia.

### 3. Research Methods

The current study goal is to investigate the impact of e-quality along with incident management and quality management on the training stimulation of government employees in Indonesia. The goal also consists of the investigation of the moderating role of quality information system among the links of e-quality, incident management, quality management and training stimulation of government employees. The quantitative method has been executed by the study through which data has been collected by using questionnaires. The questionnaires have been distributed to the employees of the government institution in Indonesia by using simple random sampling. A total of 430 surveys has been forwarded but out of them only 290 returned and used for analysis that represents about 67.44 percent. The data has been analyzed by using smart-PLS due to the objective of the study is hypotheses testing along with the complex model has been selected by the study (Nawaz, Yousaf, Hussain, & Riaz, 2020; Yana, Rusdhi, & Wibowo, 2015). The quality information system (QIS) has used as a moderator that has seven items, while training simulation (TS) has been used as a dependent construct and has five items. In addition, quality management (QM), incident management (IM) and e-quality (EQ) have been used as the predictors that have six, four and three items respectively. These constructs have been mentioned with links in Figure 1.



**Figure 1.** Theoretical model

#### 4. Findings

The findings include the assessment of measurement along with the structural model. The assessment of the measurement model is necessary for the assessment of the structural model. The assessment of measurement model includes the checking of convergent along with discriminant validity while the assessment of the structural model includes

the hypotheses testing. In measurement model assessment, convergent validity has been examined first that describe the nexus among items. The statistics show that items are extensively correlated and convergent validity is proved because the loadings along with AVE values are larger than 0.50 while CR along with Alpha values are not lower than 0.70. These figures are highlighted in Table 1.

**Table 1.** Convergent validity

Constructs	Items	Loadings	Alpha	CR	AVE
E-Quality	EQ1	0.747	0.755	0.859	0.671
	EQ2	0.801			
	EQ3	0.901			
Incident Management	IM1	0.904	0.922	0.945	0.811
	IM2	0.898			
	IM3	0.902			
	IM4	0.898			
Quality Information System	QIS1	0.484	0.883	0.910	0.645
	QIS2	0.911			
	QIS3	0.946			
	QIS4	0.486			
	QIS5	0.883			
	QIS7	0.945			
	QIS6	0.883			
Quality Management	QM1	0.843	0.916	0.935	0.705
	QM2	0.872			
	QM3	0.849			
	QM4	0.812			
	QM5	0.855			
	QM6	0.806			
Training Simulation	TS2	0.822	0.852	0.900	0.693
	TS3	0.830			
	TS4	0.855			
	TS5	0.823			
	TS1	0.823			

In measurement model assessment, discriminant validity has been examined second with the help of cross-loading and Fornell Larcker that describe the nexus among variables. The statistics show that variables are not extensively correlated and

discriminant validity is proved because the values that highlighted the nexus with construct itself are greater than the values that highlighted the nexus with other constructs. These figures are highlighted in Table 2 and Table 3.

**Table 2.** Fornell Larcker

	<b>EQ</b>	<b>IM</b>	<b>QIS</b>	<b>QM</b>	<b>TS</b>
EQ	0.819				
IM	0.388	0.900			
QIS	0.449	0.500	0.803		
QM	0.332	0.407	0.515	0.840	
TS	0.657	0.512	0.442	0.414	0.832

**Table 3.** Cross-loadings

	<b>EQ</b>	<b>IM</b>	<b>QIS</b>	<b>QM</b>	<b>TS</b>
EQ1	<b>0.747</b>	0.292	0.343	0.218	0.423
EQ2	<b>0.801</b>	0.251	0.343	0.239	0.501
EQ3	<b>0.901</b>	0.394	0.413	0.339	0.655
IM1	0.336	<b>0.904</b>	0.456	0.338	0.465
IM2	0.366	<b>0.898</b>	0.443	0.393	0.459
IM3	0.335	<b>0.902</b>	0.458	0.339	0.468
IM4	0.363	<b>0.898</b>	0.444	0.398	0.453
QIS1	0.132	0.199	<b>0.984</b>	0.673	0.163
QIS2	0.420	0.468	<b>0.911</b>	0.416	0.418
QIS3	0.456	0.473	<b>0.946</b>	0.368	0.421
QIS4	0.140	0.196	<b>0.986</b>	0.670	0.177
QIS5	0.391	0.471	<b>0.883</b>	0.401	0.407
QIS7	0.455	0.469	<b>0.945</b>	0.368	0.419
QM1	0.273	0.308	0.419	<b>0.843</b>	0.330
QM2	0.273	0.352	0.441	<b>0.872</b>	0.353
QM3	0.270	0.319	0.410	<b>0.849</b>	0.321
QM4	0.211	0.365	0.457	<b>0.812</b>	0.302
QM5	0.338	0.383	0.450	<b>0.855</b>	0.417
QM6	0.287	0.317	0.417	<b>0.806</b>	0.342
TS2	0.537	0.386	0.300	0.323	<b>0.822</b>
TS3	0.561	0.489	0.393	0.336	<b>0.830</b>
TS4	0.556	0.453	0.435	0.351	<b>0.855</b>
TS5	0.530	0.369	0.337	0.370	<b>0.823</b>

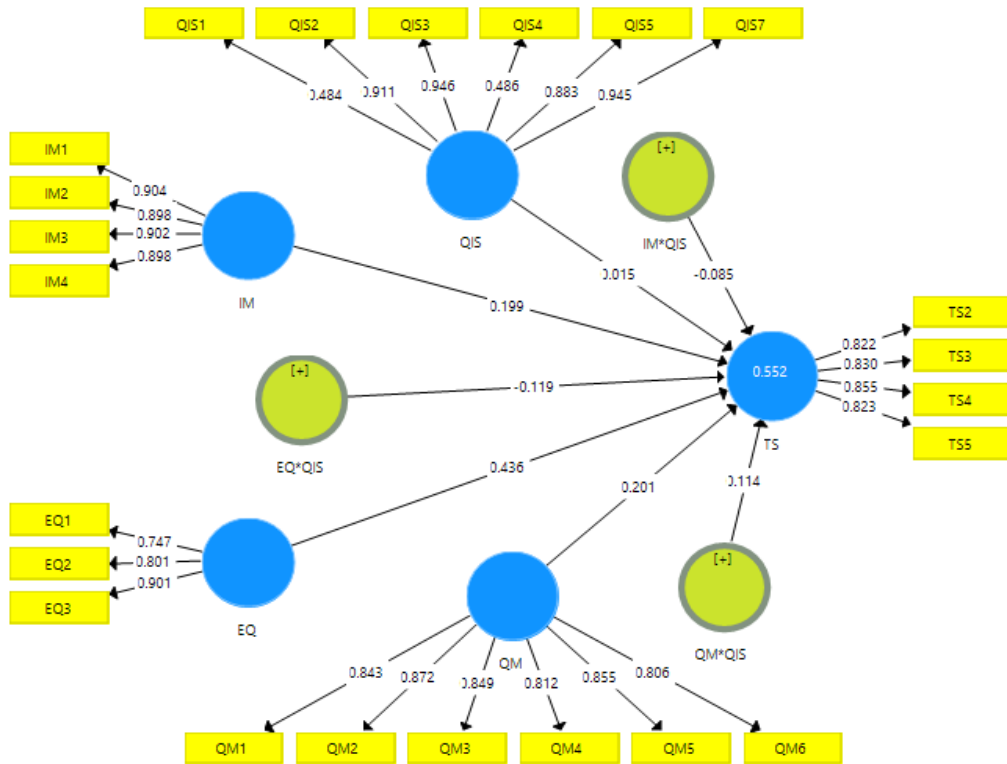
Secondly, the discriminant validity has been examined with the help of Heterotrait Monotrait ratio that describes the nexus among variables. The statistics show that variables are not extensively correlated and

discriminant validity is proved because the values of HTMT ratio are not bigger than 0.90. These figures are highlighted in Table 4.



**Table 4.** Heterotrait Monotrait ratio

	EQ	IM	QIS	QM	TS
EQ					
IM	0.458				
QIS	0.506	0.529			
QM	0.385	0.442	0.677		
TS	0.800	0.575	0.482	0.464	



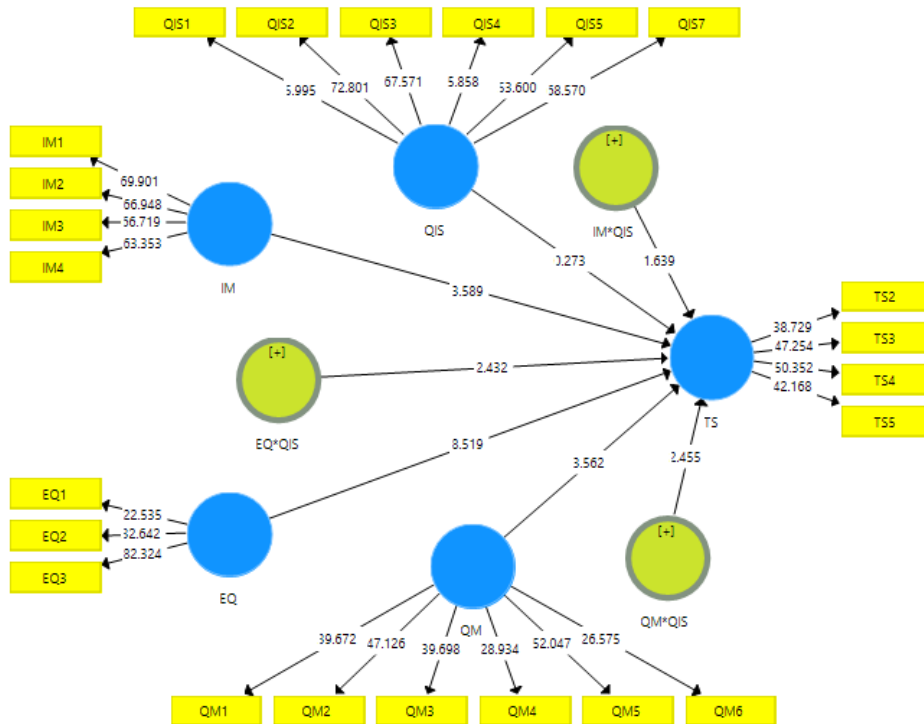
**Figure 2.** Measurement model assessment

In structural model assessment, hypotheses testing has been executing by using the path analysis. The statistics show that the e-quality, incident management and quality management have a positive association with training stimulation of government employees and accept H1, H2 and H3 because the beta linked with a positive sign, t-values are larger than 1.64 and p-values are less than 0.05. In addition, the findings also reported that quality information system has positively

moderated among the links of quality management and training stimulation of government employees and accept H4. In addition, a quality information system negatively moderated among the links of e-quality and training stimulation and accept H6. However, a quality information system negatively and insignificantly moderated among the links of incident management and training stimulation and reject H5. These nexus are highlighted in Table 5.

**Table 5.** A path analysis

Relationships	Beta	S.D.	t-statistics	p-values	L.L.	U.L.
EQ -> TS	0.436	0.051	8.519	0.000	0.365	0.534
EQ*QIS -> TS	-0.119	0.049	2.432	0.019	-0.244	-0.057
IM -> TS	0.199	0.055	3.589	0.001	0.067	0.273
IM*QIS -> TS	-0.085	0.052	1.639	0.107	-0.182	0.016
QM -> TS	0.201	0.056	3.562	0.001	0.096	0.291
QM*QIS -> TS	0.114	0.047	2.455	0.018	0.033	0.181



**Figure 3.** Structural model assessment

## 5. Discussions and Implications

The results reported that e-quality, incident management and quality management have a positive association with training stimulation of government employees. These findings are matched with the outcomes of the Soldati (2002) who also exposed that the e-quality has positively associated with the training simulation of the employees. In addition, a study by Harris, LeMaitre, Mackenzie, Fox, and Denvir (2003) investigated that training simulation has depended on the high-quality management of the institution and this could

be similar to the ongoing study outcomes. Additionally, a study conducted by El Abdelkhalki and Ahmed (2019) examined that the incident management positively influenced the training simulation that is similar to the current study output. The findings also reported that quality information system has positively moderated among the links of quality management and training stimulation of government employees while negatively moderated among the links of e-quality and training simulation. These outcomes could be similar to the Costa-Ribeiro et al. (2017) who also

examined that the quality management impact on training simulation could be enhanced by information system quality of the organization. These findings are guided to the regulators along with government employee trainers that they should focus on the quality management of the e-learning system of the employees that enhance not only the training stimulation but also improve the firm performance.

## 6. Conclusion and Limitations

Therefore, this study concluded that the public organization in Indonesia has an effective quality management system along

with high incident management and e-quality that is the reason for high employee training simulation in the organization. In addition, the public organization in Indonesia also have a quality information system that enhances the quality management positive influence on the training of the employees. The present study has suggested to the new researchers that they should also add private organizations in the analysis to expand their scope. In addition, the mediating impact should also include in the model that the current study pay less attention to it. Finally, the ongoing study recommended that upcoming studies should include more predictors in the study.

## References:

- Adams, P. J., Buetow, S., & Rossen, F. (2010). Vested interests in addiction research and policy poisonous partnerships: health sector buy-in to arrangements with government and addictive consumption industries. *Addiction*, *105*(4), 585-590.
- Al-Rousan, M. R., & Mohamed, B. (2010). Customer loyalty and the impacts of service quality: The case of five star hotels in Jordan. *International journal of human and social sciences*, *5*(13), 886-892.
- Alawneh, A., Al-Refai, H., & Batiha, K. (2013). Measuring user satisfaction from e-Government services: Lessons from Jordan. *Government Information Quarterly*, *30*(3), 277-288.
- ALsarayreh, M. N., Jawabreh, O. A., ALkharabsheh, K. S., & Aldahamsheh, M. M. (2011). Tourism promotion through the internet (websites)(Jordan as a case study). *Asian Social Science*, *7*(6), 125.
- Bastas, A., & Liyanage, K. (2018). Sustainable supply chain quality management: A systematic review. *Journal of cleaner production*, *181*, 726-744.
- Bazazo, I. K., Alananzeh, O. A., & Taani, A. A. A. (2016). Marketing the therapeutic tourist sites in Jordan using geographic information system. *Marketing*, *8*(30), 29-39.
- Bazazo, I. K., & Hasoneh, A. I. (2010). Using geographic information system to visualize travel patterns and market potentials of Petra City in Jordan. *International Journal of Marketing Studies*, *2*(2), 144-159.
- Costa-Ribeiro, A., Maux, A., Bosford, T., Aoki, Y., Castro, R., Baltar, A., . . . Monte-Silva, K. (2017). Transcranial direct current stimulation associated with gait training in Parkinson's disease: a pilot randomized clinical trial. *Developmental neurorehabilitation*, *20*(3), 121-128.
- El Abdelkhalki, J., & Ahmed, M. B. (2019). *Smart Incident Management, Prediction Engine and Performance Enhancement*. Paper presented at the The Proceedings of the Third International Conference on Smart City Applications.
- Endrullat, C., Glökler, J., Franke, P., & Frohme, M. (2016). Standardization and quality management in next-generation sequencing. *Applied & translational genomics*, *10*, 2-9.

- Fajuyigbe, O., Balogun, V., & Obembe, O. (2007). Web-based geographical information system (GIS) for tourism in Oyo State, Nigeria. *Information Technology Journal*, 6(5), 613-622.
- Gengler, R. Y., Veligura, A., Enotiadis, A., Diamanti, E. K., Gournis, D., Józsa, C., . . . Rudolf, P. (2010). Large-Yield Preparation of High-Electronic-Quality Graphene by a Langmuir–Schaefer Approach. *small*, 6(1), 35-39.
- Goossen, M., Meeuwse, H., Franke, J., & Kuyper, M. (2009). My ideal tourism destination: Personalized destination recommendation system combining individual preferences and GIS data. *Information Technology & Tourism*, 11(1), 17-30.
- Harris, S., LeMaitre, J. P., Mackenzie, G., Fox, K. A., & Denvir, M. A. (2003). A randomised study of home-based electrical stimulation of the legs and conventional bicycle exercise training for patients with chronic heart failure. *European Heart Journal*, 24(9), 871-878.
- Ivanović-Đukić, M., Stevanović, T., & Radenović, T. (2019). Does digitalization affect the contribution of entrepreneurship to economic growth? *Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business*, 37(2), 653-679.
- Jovanović, V. (2016). The application of GIS and its components in tourism. *Yugoslav Journal of Operations Research*, 18(2), 262-272.
- Kaenig, P., Rau, U., & Kirchartz, T. (2016). Extracting information about the electronic quality of organic solar-cell absorbers from fill factor and thickness. *Physical Review Applied*, 6(2), 24-31.
- Khasawneh, S., Jalghoum, Y., Harfoushi, O., & Obiedat, R. (2011). E-government program in Jordan: from inception to future plans. *International Journal of Computer Science Issues (IJCSI)*, 8(4), 568-571.
- Khattak, A., Wang, X., & Zhang, H. (2012). Incident management integration tool: dynamically predicting incident durations, secondary incident occurrence and incident delays. *IET Intelligent Transport Systems*, 6(2), 204-214.
- Khouli, H., Jahnes, K., Shapiro, J., Rose, K., Mathew, J., Gohil, A., . . . Aqeel, A. (2011). Performance of medical residents in sterile techniques during central vein catheterization: randomized trial of efficacy of simulation-based training. *Chest*, 139(1), 80-87.
- Kim, D.-Y., Kumar, V., & Kumar, U. (2012). Relationship between quality management practices and innovation. *Journal of operations management*, 30(4), 295-315.
- Luna-Reyes, L. F., & Gil-Garcia, J. R. (2011). Using institutional theory and dynamic simulation to understand complex e-Government phenomena. *Government Information Quarterly*, 28(3), 329-345.
- Marimon, F., Petnji Yaya, L. H., & Casadesus Fa, M. (2012). Impact of e-Quality and service recovery on loyalty: A study of e-banking in Spain. *Total Quality Management & Business Excellence*, 23(7-8), 769-787.
- Nawaz, M. A., Yousaf, W., Hussain, M. S., & Riaz, M. (2020). Effect of tourism growth on CO2 emissions and economic growth in South Asian countries: A panel GMM approach. *Hamdard Islamicus*, 43(1), 406-415.
- Nicolaou, A. I., Ibrahim, M., & Van Heck, E. (2013). Information quality, trust, and risk perceptions in electronic data exchanges. *Decision Support Systems*, 54(2), 986-996.
- Nimri, M., Bdair, A., & Al Bitar, H. (2015). Applying the expectancy theory to explain the motivation of public sector employees in Jordan. *Middle East Journal of Business*, 55(2433), 1-13.

- Peng, Y., Zhang, Y., Tang, Y., & Li, S. (2011). An incident information management framework based on data integration, data mining, and multi-criteria decision making. *Decision Support Systems*, 51(2), 316-327.
- Pérez, O., Telfer, T., & Ross, L. (2003). Use of GIS-based models for integrating and developing marine fish cages within the tourism industry in Tenerife (Canary Islands). *Coastal Management*, 31(4), 355-366.
- Sadikoglu, E., & Zehir, C. (2010). Investigating the effects of innovation and employee performance on the relationship between total quality management practices and firm performance: An empirical study of Turkish firms. *International Journal of Production Economics*, 127(1), 13-26.
- Sadoun, B., & Al-Bayari, O. (2009). *A GIS system for tourism management*. Paper presented at the 2009 IEEE/ACS International Conference on Computer Systems and Applications.
- Scott, D. J., Pugh, C. M., Ritter, E. M., Jacobs, L. M., Pellegrini, C. A., & Sachdeva, A. K. (2011). New directions in simulation-based surgical education and training: validation and transfer of surgical skills, use of nonsurgeons as faculty, use of simulation to screen and select surgery residents, and long-term follow-up of learners. *Surgery*, 149(6), 735-744.
- Soldati, E. (2002). National Italian register of implantable systems for spinal cord stimulation (SCS): analysis of preliminary data. *Neuromodulation: Technology at the Neural Interface*, 5(1), 7-15.
- Songchitruksa, P., & Zeng, X. (2010). Getis-Ord spatial statistics to identify hot spots by using incident management data. *Transportation Research Record*, 2165(1), 42-51.
- Steadman, R. H., & Huang, Y. M. (2012). Simulation for quality assurance in training, credentialing and maintenance of certification. *Best Practice & Research Clinical Anaesthesiology*, 26(1), 3-15.
- Tecim, V. (1997). Geographical Information System Based Decision Support System for Tourism Planning and Development. In *Information and Communication Technologies in Tourism 1997* (pp. 10-19): Springer.
- Tsai, C.-H., & Chen, C.-W. (2011). The establishment of a rapid natural disaster risk assessment model for the tourism industry. *Tourism management*, 32(1), 158-171.
- Wahab, S., Nor, N. A. M., & Khaled, A.-M. (2010). *The relationship between e-service quality and ease of use on electronic customer relationship management (E-CRM) performance: An empirical investigation in Jordan mobile phone services*. Paper presented at the 2010 International Conference on e-Education, e-Business, e-Management and e-Learning.
- Yana, A. G. A., Rusdhi, H., & Wibowo, M. A. (2015). Analysis of factors affecting design changes in construction project with Partial Least Square (PLS). *Procedia Engineering*, 125, 40-45.
- Yoo, C. W., Kim, Y. J., & Sanders, G. L. (2015). The impact of interactivity of electronic word of mouth systems and E-Quality on decision support in the context of the e-marketplace. *Information & Management*, 52(4), 496-505.
- Young, D. R. (2000). Alternative models of government-nonprofit sector relations: Theoretical and international perspectives. *Nonprofit and voluntary sector quarterly*, 29(1), 149-172.
- Zelnik, M., Maletič, M., Maletič, D., & Gomišček, B. (2012). Quality management systems as a link between management and employees. *Total Quality Management & Business Excellence*, 23(1), 45-62.

---

**Husni Teja Sukmana**

Syarif Hidayatullah State  
Islamic University,  
Indonesia  
[husniteja@uinjkt.ac.id](mailto:husniteja@uinjkt.ac.id)

**Kyung Oh Lee**

Sun Moon University,  
Korea  
[leeko@sunmoon.ac.kr](mailto:leeko@sunmoon.ac.kr)

**Taqwa Hariguna**

Universitas Amikom  
Purwokerto,  
Indonesia  
[taqwa@amikompurwokerto.ac.id](mailto:taqwa@amikompurwokerto.ac.id)

**Munawaroh**

STIE Al-khairiyah,  
Indonesia  
[nawa88munaw@gmail.com](mailto:nawa88munaw@gmail.com)

---