A Systematic Literature Review of E-Government Evaluation

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ABSTRACT

Adopting information and communication technology has affected remodeling the general public service delivery called e-government. E-government evaluation is crucial to evaluate how a long way the improvement in the quality of the public service delivery is provided by the technology. This study aimed to summarize and decide the influencing factors in e-government evaluation by analyzing published scientific articles. This study method used a systematic literature review using PRISMA reporting suggestions. The authors searched scientific articles in the online database Elsevier (Scopus) written in English and can be accessed in the entire paper. This study uses 18 articles of data to conduct a systematic literature review. The findings show that most previous studies on e-government service evaluation were published in 2018 and 2020. The findings also show that developing countries are the most dominating research locations. In addition, the findings show the influencing factors in e-government evaluation are 1) user satisfaction consists of reliability/efficiency, compatibility, perceived benefit, trust, responsiveness, overall satisfaction; 2) Site Quality consists of information quality, system quality, service quality, perceived usefulness, ease to use, accessibility, security and privacy, effectiveness, design, and content; 3) Facilitating condition consist of IT infrastructure. Based on these variables, this study offers a framework in the form of a pyramid model as the basis for future research to evaluate the quality of e-government holistically. This study has limitations because it only uses the online database Elsevier (Scopus) as a database to obtain published scientific article data during 2014-2021.

INTRODUCTION

The development of information and communication technology (ICTs) is increasingly unstoppable. As a result, various aspects of life, such as the organization and the environment, adjust to existing changes. The government is no exception. ICTs have been a method, tool, and instrument for altering and modernizing the public sector in the last decade (Apriliyanti et al., 2021; Sigwejo & Pather, 2016). ICTs have changed the way communication dan relationship between citizens, the business sector, and government (Alsaif, 2013; Rihandoyo, 2018).

The diffusion of technology in government services delivery has appeared in the public administration literature known as "e-government" (Chohan & Hu, 2020; Mensah, 2017; Mensah et al., 2020; West, 2004). It has played an essential role in government services delivery since the 2000s (Budding et al., 2018). However, there is much literature that calls it with other terms such as "e-government" (Chohan & Hu, 2020; Mensah, 2017; Mensah et al., 2020; West, 2004)., "digital government" (OECD, 2017), "mobile government (m-government)" (Akkaya et al., 2010; Al-Sakran & Alsudairi, 2021; Ali & Al Kabbi, 2018; Serra et al., 2015). These terms have the same meaning, which refers to technological tools in the government sector to improve the interaction and communication between the government, public, and business sectors. The World Bank (2015) defines e-government as "the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that can transform relations with citizens, businesses, and other arms of government." Based on this definition, e-government was a method used by the government in transforming of traditional public service delivery system into a digital public service delivery system. Previous studies agreed that the adoption of e-government had three objectives: to provide information to the public (Kawashita et al., 2020; Rotta et al., 2019; Van Der Geest & Velleman, 2014), to provide comprehensive public services (Kawashita et al., 2020; Rotta et al., 2019; Serra et al., 2015; Van Der Geest & Velleman, 2014) and to increase access to community participation (Osman et al., 2014; Pérez-Morote et al., 2020).

Evaluation of e-government quality is a way to assess how healthy e-government implementation has achieved these goals. Many previous studies have measured e-government quality in different ways. Each study uses different dimensions and different theories in evaluating it. This study is further from earlier studies which use several theories to determine the technology diffusion among users. However, only a few studies adopt multiple theories within a research model framework. The previous study was very limited in adopting *DeLone dan McLean's IS success*, SERVQUAL, and TAM theory to understand to what extent technology diffusion (Idoughi & Abdelhakim, 2018). A previous study adopted the UTAUT dan TAM theory (Khrais et al., 2019). A previous study adopted *DeLone dan McLean's IS success* and SErvqual theory (Verkijika & De Wet, 2018a). A previous study adopted TAM and SERVQUAl theory (Rasyid & Alfina, 2017). Although previous studies have focused on the adoption of several theories, many previous researchers suggest adding other essential aspects in assessing the technology diffusion (Al Nidawy et al., 2020; Rasyid & Alfina, 2017; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020; Ziemba et al., 2014).

Therefore, this study aims to redefine the crucial elements in evaluating e-government quality holistically and presenting a holistic conceptual model for assessing e-government quality from various dimensions obtained from systematic studies and meta-analyses. This study aims to determine the influencing factors in e-government evaluation by analyzing published scientific articles. This study also aims to summarize and critically analyze the literature on e-government evaluation of the recent decade. This study was undertaken to update the systematic literature review of e-government evaluation.

On the other hand, only a study about e-government evaluation using a systematic literature review was published in 2016 (Qureshi et al., 2017). The previous study has several limitations in this regard: 1) The study only summarizes and integrates the previously published e-government evaluation literature without analyzing the summary results obtained, 2) The study analyzes aspects that have increased or decreased in e-government evaluation, and 3) the study used a limited keyword string which causes the number of article search results obtained is also limited. Based on several weaknesses of the research conducted by Qureshi et al. (2017). This study tried a systematic review using additional terms with the same meaning. As a result, this research is to update the prior systematic review. In addition, this research goal is also to examine previous studies on e-government evaluation to understand better the key elements that influence technology adoption. The authors carried out the systematic reviews and meta-analysis reporting (PRISMA) delivered by Moher et al. (2009). Furthermore, this research is part of a larger project to build an e-government evaluation framework, the variables for which will be discovered via earlier research.

A systematic review method attempted to gather empirical evidence found by previous studies. A systematic literature review provides "precise, synthesized and up to date information to identify well-written and most relevant studies and to understand and utilize strategies which diminish bias and maximize accuracy" (Twizeyimana & Andersson, 2019). The guidance of this systematic literature review observed reporting items for systematic review and meta-analysis. However, the study used four database sources. This study raised the following research question:

RQ1: What are to be identified from e-government evaluation?

RQ2: What factors are most frequently used to evaluate e-government?

This study is expected to add literature that can be used as a source of information for other researchers in developing research on the e-government evaluation research topic. There are three target audiences to observe. First, the authors targeted different researchers to obtain a systematic literature review of e-government assessment. Second, the author's purpose authorities who need to enhance e-government quality may affect e-government design and implementation. Third, the authors focused on e-government system developers who need to apprehend the e-government evaluation elements that need to be considered in planning earlier than imposing e-government service. This examination changed into five sections to make it less complicated for the audiences to understand the object's contents. Within the first segment, the authors explain the research background. In the second segment, the authors explain the literature review of e-government evaluation. Then, the authors explain the research

method. After that, the authors describe the study's results and discussions the result. Subsequently, the authors explain the conclusion of this study.

METHOD

A systematic literature review was achieved with former studies published from 2014-2021 using PRISMA reporting suggestions. PRISMA is a step-by-step systematic review and meta-analysis tool that helps writers present the findings of a systematic review of any form of published research (Moher et al., 2009). The authors carried out the PRISMA procedures delivered by Moher et al. (2009). In keeping with PRISMA guidelines, there are five essential steps for the authors should take in conducting a systematic review.

Eligibility criteria

The authors set the review guidelines inclusion criteria (IC) as follows:
IC1: Original and peer review research written in English and can be accessed in the full paper; and
IC2: Research aimed at investigating the e-government evaluation.
The authors accomplished step one by selecting articles written in English (IC1); English is chosen as the language usually used by scientific researchers. After that, the authors finished the following step by applying IC2 to answer the study's question.

Information resources

The author searched the online database of educational research as a resource of records in acquiring articles. The online database used in this study was Elsevier (SCOPUS). The authors removed articles from the study that could not be viewed in the whole paper. The authors skimmed the references included in those articles to find associated research.

Study selection

The authors selected articles with the following four phases:

- The authors applied a keyword string that matches our research interest in looking for relevant e-government evaluation. The search string related to "evaluation" (including terms such as "evaluation," "appraisal," "assessment) and "e-government" (including terms such as "e-government," "i-government," "m-government," "digital device").
- Eligibility criteria guided the exploration and selection of title, abstract, and keyword for identified publications.
- Reading full text on each article that was not eliminated in the previous phrases was done to re-eliminate the articles that should be included in the review based on eligibility criteria.

Information collection process

The information collection becomes finished manually using information extraction of the following content materials: authors, title, year, journal's name, topic, country, abstract, keyword, research method, and research variables. Each author reads the complete textual content and extracts information to get doubtlessly relevant articles.

Any variations of opinion are resolved through dialogue and rereading the full-textual content.

Information item selection

The authors have taken the information from each article consisting of:
(1) Demography of selected studies, together with the following information:
   (i).   Distribution year of e-government evaluation.
   (ii).   Country involved in e-government evaluation.
   (iii).   Sources of the selected study.
(2) Influencing factors related to e-government evaluation.

The research method explains how the studies are carried out, including studies design, information collection, studies instrument and analytic techniques, and the results' reliability and validity. This component must be narrated.

RESULTS AND DISCUSSION

Study selection

Searching articles according to our research interest in looking for relevant e-government evaluation requires the keyword string to find relevant articles. Search results on the online database of Scopus provided a total of 2052 studies from 2014 to 2021.
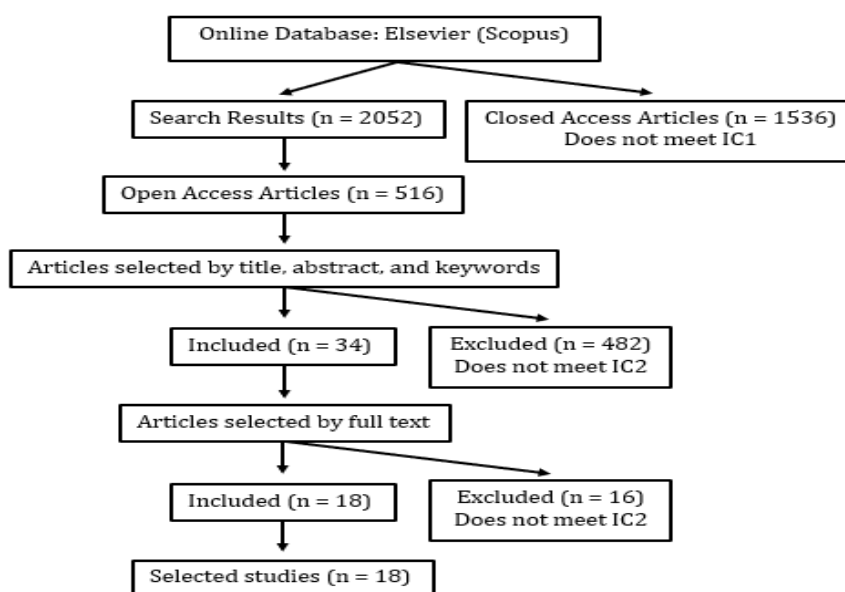
**Figure 1.** Flow Chart Based on PRISMA Guidelines.

Figure 1 shows a flow chart based on PRISMA guidelines. The authors conducted a selection study searching for articles using the keyword string during the first stage. The search results were 2052 documents. After the search process was done, the authors changed the search settings for English articles and can be accessed in full articles (IC1). Advanced search settings were carried out only on English articles with full open access in Elsevier's online database (SCOPUS). It provides 516 documents and can be accessed in full articles. One thousand five hundred thirty-six articles were eliminated because most

were not accessed in full articles. In the third stage, the authors conducted the study selection through exploration and selection of title, abstract, and keyword of identified articles. The study selection provides 34 articles. Four hundred eighty-two articles were eliminated because most did not discuss e-government evaluation (IC2). Then, 34 articles were eliminated using the full text. After that, each author reads full text on each article, reviews based on eligibility criteria, and performs manual table data extraction. Then, the authors discussed the results of their work. Differences in results from each author are discussed again together. Sixteen articles were eliminated because most did not meet IC2. Finally, the selection studies process in the last review conducted 18 articles.

Demography of Selected Studies

The demography of 18 selected studies is described in Table1. The results of 18 selected studies show that identified distribution year of e-government evaluation related to two articles published in 2014 (Osman et al., 2014; Ziemba et al., 2014), an article published in 2015 (Serra et al., 2015), an article published in 2016 (Sigwejo & Pather, 2016), and an article published in 2017 (Rasyid & Alfina, 2017), five articles published in 2018 (Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Rihandoyo, 2018; Verkijika & De Wet, 2018a, 2018b), two articles published in 2019 Naswir et al., 2019 Khrais et al., 2019, 4 articles published in 2020 (Bournaris, 2020; Chang & Almaghalsah, 2020; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020), and two articles published in 2021 (Al-Sakran & Alsudairi, 2021; Alsaeed et al., 2021). Table 2 shows most previous studies on e-government service evaluation published in 2018 (Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Rihandoyo, 2018; Verkijika & De Wet, 2018a, 2018b) and published in 2020 (Bournaris, 2020; Chang & Almaghalsah, 2020; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020). The increasing research in e-government evaluation in those years became interesting because those years were the momentum where the United Nations measured the e-government maturity level in all countries members of the United Nations. The data from the measurement of e-government maturity level is why research on e-government evaluation is carried out in even-numbered years.

Table 1. Distribution year of the e-government evaluation study
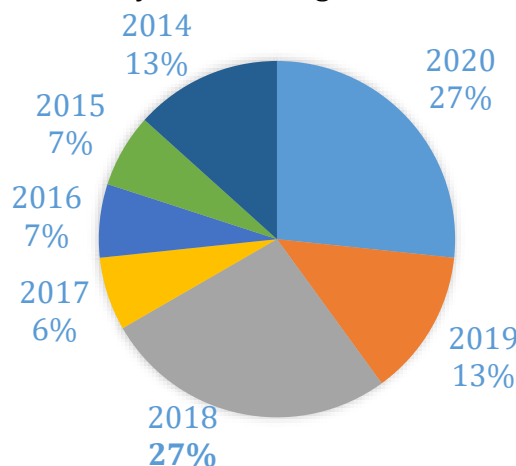
Source: Summarized from previously studied results.

On the opposite facet, the increasing research in 2020 resulted from implementing public health service to face and deal with the Pandemic COVID-19. Its situation made the government all over the international used ICTs to be innovative authorities approach in responding to COVID-19. Technology adoption is a government strategy considered the most effective and efficient to provide public services amidst uncertainty. E-government services are the most critical public health device for disseminating information without difficulty (Mensah et al., 2021) and carrying out touch tracing (Park et al., 2020). E-government services benefit stakeholders via included offerings without having to satisfy face-to-face transactions. Implementing e-government services (including internet sites, mobile applications, social media, and others) helps the authorities offer professional records in an included pandemic COVID-19. E-government development in the shape of *Government-to-Citizen* (G2C) (Chen, 2015; Lupu & Lazăr, 2015; Mensah & Adams, 2019; Nulhusna et al., 2017; Rufín et al., 2012; Saengchai et al., 2020). *Government-to-Employee* (G2E) improves relationships and interactions through virtual media among the authorities and laborers (Nulhusna et al., 2017). Communique between government and the workers' control and finance department (Carter & Bélanger, 2005); *Government-to-Government* (G2G) is used for relationships and interactions through virtual media between one government and another government (Chen, 2015; Mensah & Adams, 2019; Nulhusna et al., 2017; Rufín et al., 2012; Saengchai et al., 2020); *Government-to-Business* (G2B) is used to build and to improve government relations and interactions with business enterprises (Nulhusna et al., 2017; Rufín et al., 2012; Saengchai et al., 2020). This development of virtual public services has led many previous studies to behavior research to evaluate the exception of e-government.

Figure 2. Country involve in e-government evaluation
Source: Summarized from previously studied results.

Table 2. Sources of Selected Studies

Article Type	The Tittle of Publisher	Total of Articles
Journal	IEEE Access	1
	Applied Sciences (Switzerland)	1
	Agronomy	1
	Register: Jurnal Ilmiah Teknologi Sistem Informasi (Scientific Journal of Information System Technology)	1
	International Journal of Data and Network Science	1
	International Journal of Advanced Computer Science and Applications	2
	Electronic Journal of Information Systems in Developing Countries	2
	International Journal of Electronic Government Research	1
	Government Information Quarterly	1
	International Journal of Information Management	1
	Journal of Theoretical and Applied Information Technology	1
Conference and Proceedings	IOP Conference Series: Earth and Environmental Science	1
	IOP Conference Series: Journal of Physics	1
	Proceedings of the 2014 Federated Conference on Computer Science and Information Systems	1
	Procedia Computer Science	1
	E3S Web of Conferences	1
		18

Source: Summarized from previously studied results.

Figure 2 shows that research on e-government evaluation has been carried out in many developed and developing countries. Locations of research on e-government evaluation in developed countries were in Greece (Bournaris, 2020), Polish (Ziemba et al., 2014), and Taiwan (Chang & Almaghalsah, 2020). At the same time, the research location in developing countries is carried out in Algeria (Idoughi & Abdelhakim, 2018), Brazil (Serra et al., 2015), Jordan (Khrais et al., 2019), Indonesia (Rasyid & Alfina, 2017; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020), Iraq (Al-Sulami & Hashim, 2018), Malaysia (Naswir et al., 2019), Saudi Arabian (Al-Sakran & Alsudairi, 2021; Alsaeed et al., 2021), Sub-Saharan Africa (Verkijika & De Wet, 2018a, 2018b), Tanzania (Sigwejo & Pather, 2016), and Turkey (Osman et al., 2014). Figure 2 shows that Indonesia is the research location most taken by previous studies as an e-government evaluation research location (Rasyid & Alfina, 2017; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020). Indonesia is committed to adopting ICTs to improve existing services' quality (Rasyid & Alfina, 2017). The central

government's commitment is stated in Law No. 11 the Year 2008 concerning Information and Electronic Transactions, then described in Government Regulation No. 82 the Year 2021 concerning the Implementation of Electronic Systems and Transactions, and reaffirmed through Presidential Regulation No. 95 Year 2018 concerning Electronic-Based Government System (SPBE). The adoption of ICTs in Indonesia provides many benefits ranging from increasing government transparancy (Rihandoyo, 2018; Sarasati & Madyatmadja, 2020), increasing public services delevery (Rasyid & Alfina, 2017; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020), increasing public participation in decision-making process (Sarasati & Madyatmadja, 2020). This adoption of ICTs has led many previous studies to take research locations in Indonesia (Rasyid & Alfina, 2017; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sorongan & Hidayati, 2020). According to Table 2, e-government evaluation studies are published in a most international journals. There are 16 articles published in journals and four published in conferences and proceedings.

Table 3. The Most Influencing Factors

Factor	Variables	Number of Variables	References
User Satisfaction	Reliability/Efficiency	5	(Al-Sakran & Alsudairi, 2021; Chang & Almaghalsah, 2020; Naswir et al., 2019; Rasyid & Alfina, 2017; Ziemba et al., 2014)
	Compatibility	2	(Alsaeed et al., 2021; Ziemba et al., 2014)
	Perceived of benefit	5	(Osman et al., 2014; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020)
	Trust	4	(Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Khrais et al., 2019; Rihandoyo, 2018)
	Responsiveness	2	(Verkijika & De Wet, 2018a, 2018b)
	Overall Satisfaction	6	(Al-Sakran & Alsudairi, 2021; Al-Sulami & Hashim, 2018; Naswir et al., 2019; Osman et al., 2014; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020)
Site Quality	Information Quality	3	(Idoughi & Abdelhakim, 2018; Sorongan & Hidayati, 2020; Verkijika & De Wet, 2018b)

	System Quality	3	(Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Sorongan & Hidayati, 2020)
	Service Quality	5	(Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020; Verkijika & De Wet, 2018b)
	Perceived Usefulness	3	(Idoughi & Abdelhakim, 2018; Khrais et al., 2019; Naswir et al., 2019)
	Easy to use	3	(Khrais et al., 2019; Rasyid & Alfina, 2017; Sarasati & Madyatmadja, 2020)
	Accessibility	5	(Alsaeed et al., 2021; Rihandoyo, 2018; Serra et al., 2015; Verkijika & De Wet, 2018a, 2018b)
	Effectiveness	2	(Al-Sakran & Alsudairi, 2021; Naswir et al., 2019)
	Privacy and security	3	(Rasyid & Alfina, 2017; Verkijika & De Wet, 2018b; Ziemba et al., 2014)
	Design	2	(Bournaris, 2020; Rasyid & Alfina, 2017)
	Content	2	(Bournaris, 2020; Sorongan & Hidayati, 2020)
Facilitating Condition	IT Infrastructure	2	(Khrais et al., 2019; Sigwejo & Pather, 2016)

Source: Summarized from previously studied results.

Table 3 shows the most used variables in the previous study. The authors grouped the most used variables into three factors used in evaluating the quality of e-government. Sigwejo & Pather (2016) said at least two factors related to measuring the effectiveness of electronic services, namely user satisfaction, which reflects e-government expectations that effectively meet user expectations and facilitating conditions. Facilitating condition factors collectively support the effectiveness of e-government implementation, which will lead to the broader application of e-government by service providers or users to increase their potential utilization. In addition, this study adds a facilitating condition factor as a basis for identifying variables that measure technical matters that support e-government implementation. Technical site quality factors are used to identify variables that measure technology quality. Then the user satisfaction factor is the basis for determining the variables that measure user expectations. The site quality affects whether digital services are able or not able to meet user expectations, which in the end behavior intention as a form of actual use of electronic services. Based on the findings of the influencing factors in e-government evaluation, critically analyze them. This study proposes a pyramid model for e-government evaluation to evaluate e-government holistically. The pyramid model for e-government evaluation presents a holistic

framework that allows future studies to delve deeper into every element of e-government quality.
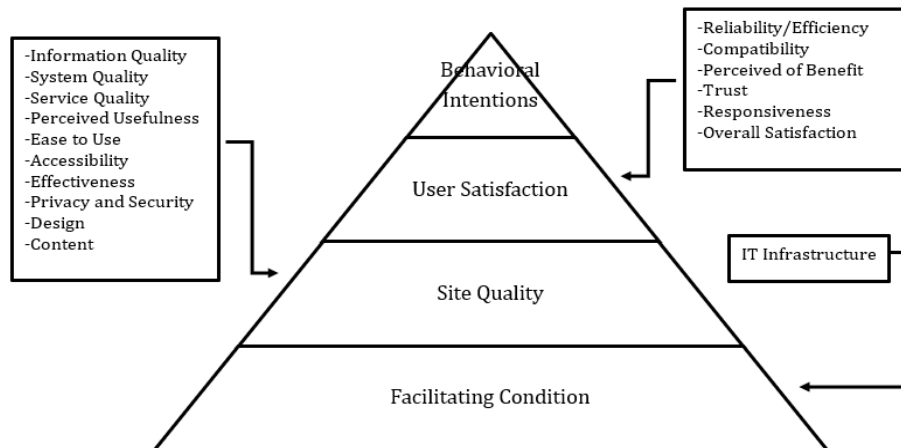
Figure 3. Pyramid Model for e-Government Evaluation

Figure 3 shows the elements for each factor in the pyramid model for e-government evaluation. Facilitating condition consists of IT infrastructure (Khrais et al., 2019; Sigwejo & Pather, 2016). Facilitating condition factor is defined in UTAUT. UTAUT explained that technical infrastructure and organizations exist to remove technology diffusion barriers. The implementation of e-government is strongly supported by technical aspects related to the availability of reliable IT infrastructure in supporting the implementation of e-government and accelerating the diffusion of e-government (Apriliyanti et al., 2021). Sigwejo & Pather (2016) argue that the government must provide ICT infrastructure to support public access to the e-government service provided.

Site quality consists of information quality (Idoughi & Abdelhakim, 2018; Sorongan & Hidayati, 2020; Verkijika & De Wet, 2018b), system quality (Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Sorongan & Hidayati, 2020), service quality (Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020; Verkijika & De Wet, 2018b), perceived usefulness (Idoughi & Abdelhakim, 2018; Khrais et al., 2019; Naswir et al., 2019), ease to use (Khrais et al., 2019; Rasyid & Alfina, 2017; Sarasati & Madyatmadja, 2020), accessibility (Alsaeed et al., 2021; Rihandoyo, 2018; Serra et al., 2015; Verkijika & De Wet, 2018a, 2018b), security and privacy (Rasyid & Alfina, 2017; Verkijika & De Wet, 2018b; Ziemba et al., 2014), design (Bournaris, 2020; Rasyid & Alfina, 2017), and content (Bournaris, 2020; Sorongan & Hidayati, 2020). These factors-information quality, system quality, service quality, perceived usefulness, ease to use, security and privacy, effectiveness, design, and content-are defined in the *DeLone and McLean's IS success model*, Technological Acceptance Model (TAM), and user interface (UI). *DeLone dan McLean's IS success model* framework by DeLone & McLean (2003) is a comprehensive model that explains the relationship between technological factors in the success of technology diffusion built by information quality and *system quality* (including the *security and privacy* factor) and *service quality*. TAM as a practical framework also explains a relationship between technological factors built by perceived usefulness and *ease to use* (including the *accessibility* factors) that affect the technology diffusion.

Lean et al. (2009) argue that TAM is the basis for exploring how technological factors impact the internal beliefs of information technology users. Accessibility, design,

and content are related to UI elements as a way for users to interact and communicate with computers in devices, applications, or websites. Rihandoyo (2018) argues that accessibility is a method of assessing the appearance of the digital service menu on the interface. Serra et al. (2015) also argue that interface use related to the appearance of the products, services, and other facilities in the computing system serves as access to various types of information by the public with the widest reach.

User satisfaction consists of reliability/efficiency (Al-Sakran & Alsudairi, 2021; Chang & Almaghalsah, 2020; Naswir et al., 2019; Rasyid & Alfina, 2017; Ziemba et al., 2014), effectiveness (Al-Sakran & Alsudairi, 2021; Naswir et al., 2019), compatibility (Alsaeed et al., 2021; Ziemba et al., 2014), perceived of benefit (Osman et al., 2014; Rihandoyo, 2018; Sarasati & Madyatmadja, 2020; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020), trust (Al-Sulami & Hashim, 2018; Idoughi & Abdelhakim, 2018; Khrais et al., 2019; Rihandoyo, 2018), responsiveness (Verkijika & De Wet, 2018a, 2018b), and overall satisfaction (Al-Sakran & Alsudairi, 2021; Al-Sulami & Hashim, 2018; Naswir et al., 2019; Osman et al., 2014; Sigwejo & Pather, 2016; Sorongan & Hidayati, 2020). Sigwejo & Pather (2016) argue that user satisfaction as a means to degree desire the quantity citizens accept as accurate with the carrier to be had to satisfy their expectations. Naswir et al. (2019) also argue that user satisfaction is vital to focus on personal comfort and acceptance because it has driven a great potential to encourage user loyalty in using digital services.

The difficulty with e-government services in Indonesia is that faults or system errors often occur in 23 provinces (Sorongan & Hidayati, 2020). Previous studies have also revealed that improvements are needed in areas such as website design and display (Rasyid & Alfina, 2017; Sarasati & Madyatmadja, 2020), ease of use of online services (Rasyid & Alfina, 2017), accessibility of online services (Rihandoyo, 2018; Sorongan & Hidayati, 2020), service responsiveness (Sarasati & Madyatmadja, 2020), and user trust (Rihandoyo, 2018). The majority of these issues are connected to site quality and customer pleasure. Many things can improve the quality of e-government. The government must work with the private sector to provide IT infrastructure. The development of IT infrastructure provision necessitates financial resources, time, knowledge, and sophisticated technology. Public-private partnerships based on resource sharing can assist speed growth. The government also must perform an accessibility audit as part of the development and implementation of e-government services (including mobile applications, website services, government portals). Given that accessibility audits are a critical step in identifying accessibility concerns that obstruct electronic services accessible to all people in interactive systems (Serra et al., 2015). Previous research mentions several international standard accessibility audit methods such as Web Content Accessibility Guidelines (WCAG) 2.0 (Alsaeed et al., 2021;Serra et al., 2015), Functional accessibility evaluator (FAE) 2.0 (Verkijika & De Wet, 2018a, 2018b), Nielson usability guidelines (Alsaeed et al., 2021; Verkijika & De Wet, 2018a), which can assist the process of developing and evaluating online services.

IT infrastructure provision and accessibility audits are also government efforts in dealing with security and privacy issues in electronic services. According to (Al-Busaidy & Weerakkody, 2009), the improvements in e-government security and privacy issues impact increasing citizens' trust. In addition, as a tactic for gaining public trust, the

Indonesian government must cultivate a good image of the institution. When it comes to using internet services, public trust is critical. Technical skills and capacities must be developed to increase the responsiveness of the state apparatus in providing services.

CONCLUSION

The implementation of e-government has provided many benefits in the public sector. Implementing e-government requires various factors to support effectiveness and accelerate the technology diffusion process. However, most e-government implementations are only measured by several factors. This study reviews previous research on e-government evaluation using PRISMA reporting suggestions. This study aims to determine the influencing factors in e-government evaluation. The study findings show 1) the most previous studies on e-government service evaluation published in 2018 and 2020, 2) Developing countries are the most dominating research locations, 3) The influencing factors in e-government evaluation are user satisfaction consists of reliability/efficiency, compatibility, perceived of benefit, trust, responsiveness, and overall satisfaction; site quality consists of information quality, system quality, service quality, perceived usefulness, ease to use, accessibility, security and privacy, effectiveness, design, and content; and facilitating condition consists of IT infrastructure. Based on these factors, attempts to offer a framework in e-government evaluation in the form of the pyramid model for e-government evaluation. This model allows future studies to delve deeper into every element of e-government quality holistically. This study has a limited number of databases used to search for articles. This study only used Elsevier (Scopus) as a single database. Future systematic literature reviews are expected to use more databases to search for articles and use more synonyms in keyword strings.

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