Social Media-Based E-Government Application Feature

Evaristus Didik Madyatmadja, Leonard Julio Kiswanto

Abstract - Relation between e-Government and social media is an inseparable relationship. The purpose of e-Government who wants to improve public services, with the help of information and communication technology. The best solution is using social media. In Indonesia, e-Government is a concept that is implemented not only by the central government, but also by regional/local governments. Right now, many local governments in Indonesia already implemented e-Government. However, not all of Indonesia local governments that implemented e-government have a social media-based e-Government application. There is a chance that a certain city/regency at Indonesia using same social media-based e-Government application. If the application is seen in terms of features, each application also has different features combination, which are the strengths and the uniqueness of each application. In this study, there are 9 applications that examined from 9 cities / regency in Indonesia. The purpose of this study is to analyse the relation between e-government and social media, in terms of using social media features and identified features that exist in each e-Government application that examined from 9 cities / regency in Indonesia with Systematic Literature Review. The feature found will be categorized with feature functionality categorization: Identity, Conversations, Sharing, Presence, Relationships, Reputation, and Groups. Each feature found can be having more than 1 feature functionality. The result of this study can be used as an indicator about features available at social media-based e-Government application and this study can be used to be a comparison or references for making another social media-based e-Government application in the future.
Keywords: Feature, e-Government Application, Social Media, Systematic Literature Review

I. INTRODUCTION

World Summit of the Information Society (WSIS) which was held in December 2003 at Geneva. The summit produced an outcome, the outcome was a decision that was targeted in 2015, every country in the world must strive that educational institution, government agency, hospitals are all connected to communication and information networks. It is also targeted that 50% of the world's population already have an ability to access information through information & communication technology. The aim is to realize communication society [26].

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Indonesia Government itself responds positively to this outcome, even to the point of making mandatory the use of information & communication technology by government agencies plus public institutions for the public and government interests. Another evidence that Indonesia Government support of the summit outcome is the issuance of a legal standard of this matter,

Presidential Instruction No. 3 of 2003 concerning about National Policies and Strategies for e-Government Development which was originally intended to address WSIS [4]. This policy also aims to encourage the implementation of e-government application at central and regional government institutions [2]. Although, previously at 2001, there was a Presidential Instruction No. 6 of 2001. This Presidential Instruction contains about initiatives on the development of e-Government in Indonesia. Can be said that, Presidential Instruction No. 6 of 2001 is the initial basis, then Presidential Instruction No. 3 of 2003 as legal basis reinforcement [27].

If we compared Indonesia with other countries, let's say Turkey. Turkey itself has implemented e-Government in 1998 for taxing, the Tax Office Automation Project [28]. Also, if we compared to South Korea, South Korea itself in 1985 implemented e-Government on taxing sector in Seoul. But the practice of e-Government in South Korea can be said that only began around the 1990. Especially in 2000 where South Korea President, President Kim Dae-Jung gave 11 initiatives / ideas on e-Government [29]. Another country that can be compared is Kenya, where their e-Government which is where their e-Government was published in 2004. If we look at the year in which the e-Government concept emerged, namely in the late 1990s [30]. Could be say that Indonesia is not too late for their central government to implement e-Government, that not only at the central level but also at the regional level.

The condition of e-Government in Indonesia at the beginning of 2002, only to the stage of providing information. Majority of government agency at that stage, but there still some government agency that not at that stage. When viewed in quantity, at that time, only 369 government agency provided websites, but 24% of the websites could not survive due to budgetary reasons. At 2010, Indonesia government still experienced problems in aspects such as policy, institutional, infrastructure, application and planning. The reason was because e-Government policies, institutions & planning are minimal, also makes the infrastructure that is built cannot provide optimal effects or benefits to the public. At that time, the Ministry of Communication and Information that could be said as the leading institution in terms of implementing e-Government also did not implement e-Government optimally because the condition of they were still new at that time [31].

E-Government Development Index (EDGI) conduct a survey in 2018 which stated that Indonesia's position was at 107th in the world. While Indonesia's position was at 7th in the South East Asia, Indonesia's position is still below the average for the Southeast Asian region. Denmark, Australia, South Korea, United Kingdom and Sweden are the top country which stated on this survey.

It could be said that, the implementation of e-Government in Indonesia is still halfway and is still below the ideal standard. Seen in quantitative terms, it does show significant progress but when viewed from a quality perspective it is still inadequate because it lacks in aspects such as human resources, infrastructure and of regulations/policy. The best solution is to improve the concepts and strategies of e-Government implementation from many sides. Regulations about e-government from the government and a standard for e-Government must be made and clear, so there is no chance that the meaning of e-Government is different at various government level [32].

Right now, there are many cities/regencies in Indonesia that invest at their e-Government implementation, specially at their social media-based e-government application. Social media-based e-government application that provide by cities/regencies at Indonesia, can be said as a connecting media between the government and the community/citizen. Table of social media applications that have been implemented in several cities / districts in Indonesia can be seen in Table 1.

Table-I: Social Media-Based e-Government Application from 9 Cities/Regencies in Indonesia

City/Regency	e-Government Application	Operating System Available
Denpasar	PRO Denpasar+	Android IOS Website (pengaduan.denpasarkota.go.id)
Jakarta	Qlue & Jakarta Aman	Android IOS
Karangasem	Simda	Website (www.bpkp.go.id/bali/konten/3039/SIMDA.bpkp)
Kupang	Qlue	Android IOS
Malang	Sambat Online	Android SMS Website (sambat.malangkota.go.id)
Purbalingga	Matur Bupati	Website (maturbup.purbalinggakab.go.id)
Tangerang	Layanan Aspirasi Kotak Saran Anda (LAKSA)	Android IOS
Tangerang Selatan	SIARAN	Android IOS Website (siaran.tangerangselatankota.go.id)
Yogyakarta	Jogja Smart Service (JSS)	Android Website (jss.jogjakota.go.id)

The application above that will be sought by the government to be introduced or socialized to the public is a step so that people can access various information and services needed. From this, can be said that the government realizes the existence of information technology is very helpful for the government to interact with the community [12]. E-Government intelent application is a very important source of information for the government to correct mistakes that might occur, as well as a medium to maintain and improve services produced with existing standards and have been set [3]. In addition, the application was made also because it was difficult to get people to participate in the decision-making process. The solution is to make social media as a place to get information from the community and integrate social media in a formal process for the decision-making process [33]. Social media itself is an effective and efficient means to convey information to other parties. Social media is a media with social dynamics that can be said to be high and can make an open communication to many parties with different backgrounds and goals [6].

Research conducted by Patria & Kristianus (2010) provides results that the features available on social media can be used by users to facilitate interaction between users [34]. While the research that conducted by Sara Hofmann (2013), examined the use of social media by local governments in Germany whose focus is on managing external communication with the public. In measuring the success of communication with social media, research refers to the frequency and polarity of public comments on government posts. The results of this study found a fact that multimedia features such as photos and videos contribute to the success of communication [5].

Every e-Government application at Table 1, must be have a various feature. Each application could be said have their own advantage that can be same or different. At this research, will be analyzed and studied the features that available at the social media-based e-government application from Table 1. Using Systematic Literature Review methodology, it will analyze the features available in each application at Table 1. The purpose of this study is first to review research paper in understanding the relation between e-government and social media, particularly about the usage of social media feature for e-government implementation. Moreover, the second purpose is to analyze about feature available at existing e-government application from 9 cities/regencies in Indonesia based on empirical findings.

II. LITERATURE REVIEW

E-Government is known by many names such as Electronic Government, Electronic Governance, Digital Governance, Digital Government, Online Government, e-Government, and others [35]. Gartner defines e-Government as a continuous optimization of service provision, sustainable participation and governance by changing internal and external relations through technology, internet and new media. E-Government presents an era of modernity, innovation, and flexibility towards efficient and quality public services [36]. e-Government refers to the implementation of ICT to the public sector, just say the objectives such as increasing administrative efficiency,

and providing citizens with easier access to government in terms of information and services [37]. Basically, e-Government computerizes all data and information through the Internet and the World Wide Web as a method for sending government information and services to other communities and businesses and governments [38]. There are 3 services from e-Government in Indonesia,

namely Government-to-Citizen (G2C), Government-to-Business (G2B) and Government-to-Government (G2G). G2C is a service provided by the government to the community such as population, immigration, licensing, health and general information. G2B is an exchange of services from the government with businesses in terms of taxation, local business promotion data, business licensing & business potential information. G2G is an intergovernmental service or transaction, i.e. central & regional [39]. For access to e-Government there are many channels where people can access it. Every city government that implements e-Government does not necessarily apply all these channels. There are about 11 channels or media to access e-Government, namely Website, SMS (Short Message Service), Mobile Devices, PC, Telephone, Interactive Voice Response System, TV, Email, Call Center & Counter [40].

The Digital Government / e-Government aims to change the existing relationship between the government and the community or citizens by increasing the level of interaction and dialogue. Social media is considered to have a new opportunity to revive local government, in this case is city / district that being studied [16]. Kapplan and Heainlein define social media as a collection of web 2.0-based internet applications that provide interactive services between individuals and communities for mutual interaction, discussion, creating and modifying content [8]. Social media itself has many types, still from the classification that carried out by Kapplan and Heainlein. Social media is classified into 6 types, namely Collaborative Projects, Blogs and Microblogs, Content Communities, Social Networking Sites, Virtual Game Worlds & Virtual Social Worlds [6].

Social media provides features that are more interactive and broader for ordinary people to understand about e-Government. Social media intends to innovate how the government operates internally and how this government interacts with the public outside the government. Examples that can be taken there are usage of social media applications for government in the United States, where President Obama became a strong supporter of the usage of social media when he was a presidential candidate at that time [20].

Other research states that e-Government and social media are not separate trends. Social media applications are mentioned as innovation or technology investments in the public sector, the main component of e-Government, a step forward for local governments to use ICT as a means of providing information and services to external parties, and also as an additional channel for governments to interact with parties concerned parties or stakeholders. To be specific, adoption of social media seems to follow the same pattern as adoption of e-Government and ICT. The reason is because tools from social media face same problem of adaptation to the existing organizational culture, although it is different in its technical features [18].

III. RESEARCH METHOD

Systematic Literature Review was adopted to synthesize existing literature, which is used for answering the research question. This methodology analyses the theoretical and empirical evidence taken from journals or papers that can be said to be credible. This method can be said to be complete because it provides great evidence on phenomena in various settings and empirical methods while reducing the so-called literary bias [36]. In this study, 5 search engines were used, namely ACM Digital Library. Doaj.org, Emerald, Google Scholar & Science Direct. From 5 search engine that used, Google Scholar is the most studied found with 76 studies found. Since the research subject is an e-government application in 9 cities / districts in Indonesia, there are many studies found that in Indonesian language. Majority of studies found that in Indonesian language are from Google Scholar.

First, a literature search was carried out using 5 determined search engines with determined keyword. The keyword is Social Media Based E-Government Application Features. After the first search, the keyword is reduced into Social Media Based E-Government Applications. Then, the keyword is reduced again become Social Media E-Government Application. After that, the keyword is reduced for the last time becoming E-Government Application. The result of this literature search is called Studies Found. The next step is selecting the studies found based on the abstract, and the literature that pass the selection is called Candidate Studies. The candidate studies will be become Selected Studies, if the candidate studies match a predetermined criterion. All the features that found from the selected studies have a similarity; the similarity is the feature functionality categorization. The feature functionality categorization obtained in one of the studies found. All the features found are obtained from the result of the selected studies. The last step is to analyze the e-government application according the feature found by using or observing the application.

IV. RESULT

4.1 Studies Found

There are 4 keyword that used for finding research paper, initially using the keywords Social Media Based E-Government Application Features and obtained about 64 research papers. Then these keywords reduced into Social Media Based E-Government Applications and obtained around 41 research papers. Then the keyword was reduced again into the Social Media E-Government Application and there were around 23 research papers found. The final reduction to the keyword, get keywords E-Government Application and obtained about 33 research papers. So, from all the studies found, there are a total of about one hundred and sixty-one research papers.

4.2 Candidate Studies

At this stage, all the 161 research papers that were selected based on the abstract. After selecting process, the result is about 42 papers that became candidate studies.

4.3 Selected Studies

Research paper that can be categorized as selected studies, must meet the following criteria:

- The paper according to the research question
- The paper must be published between the years 2012-2019
- The research must be focus about the relation between e-government dan social media
- The research explains the impact of features or analysis of e-government application features

The result is the 25 research papers that meet the criteria for a review that can be seen in Figure 1. Then, the detail about data extraction which is the number of studies found that become candidate studies and finally become selected studies, can be seen in Table 2.
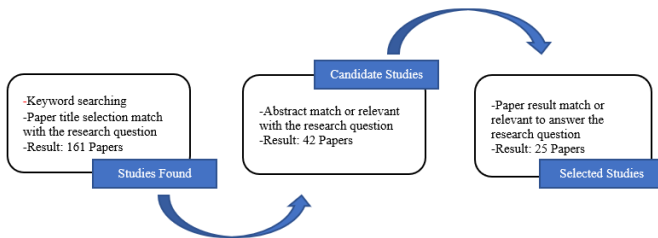

Figure 1: Searching Strategy for Systematic Literature Review

Table-II: Number of Studies in Selected Source

Search Engine	Studies Found	Candidate Studies	Selected Studies
ACM	28	10	5
Doaj.org	10	1	0
Emerald	19	7	3
Google Scholar	76	19	15
Science Direct	28	5	2
Total	161	42	25

4.4 Selected Studies Breakdown

From 25 selected research paper, there are 59 author who participated, 26 institution, and 19 universities. To see the comparison of the author demography, can be seen in Figure 2.
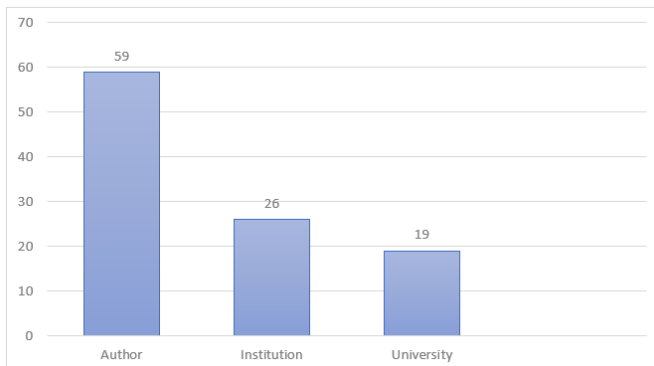

Figure 2: Author's Demography

There are 3 author that contribute 2 different research paper, the remaining author only contribute 1 research paper. From institution side, there are 4 institutions that release 2 research paper, the remaining institutions only contribute 1 research paper. The institution location is in China, Greece, Indonesia, Nigeria, South Africa and USA.

All the author worked in 18 departments which are Accounting Information System, Business, Business & Economy, Communication and Information Management, Communication Studies, Computer Science, Engineering Industry, Geography, Information Management and

Engineering, Information Studies, Information System, Information System Management, Information Technology, Law, Management, Politics, Public Administration & State Administration. Then, it all goes into 11 groups department, namely: Accounting Information System, Business and Economy, Computer Science, Communication Studies, Geography, Information Management and Engineering, Information Studies, Information System, Law, Management & Public and Politics. Author academic background can be seen in Figure 3. While for the dissemination of the university can be seen in Figure 4. For the research paper publication year span, between 2012 and 2019 as shown in Figure 5.
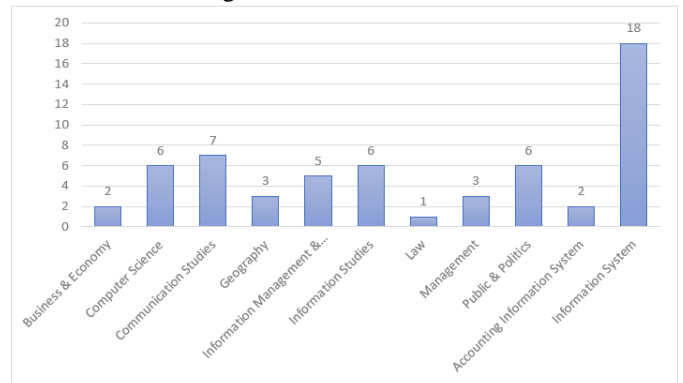

Figure 3: Author's Academic Background
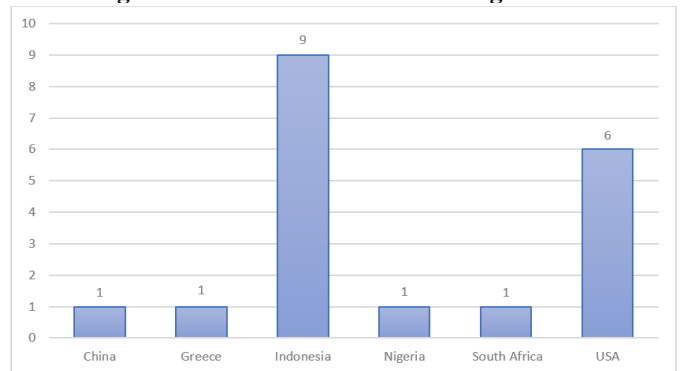
Figure 4: University in The Country

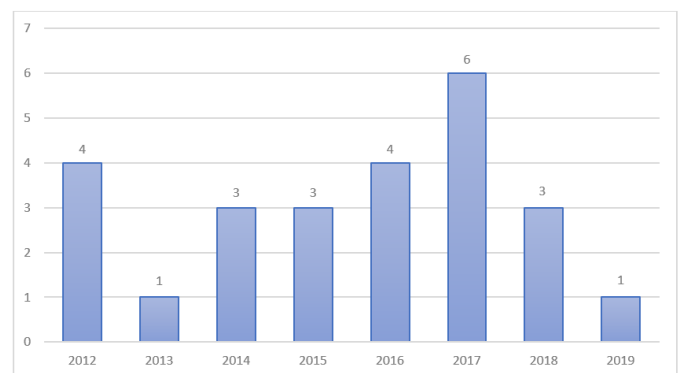**Figure 5: Publication Year**

4.5 Social Media Feature Categorization

According to Kietzmann, etl (2011), said that functionally, social media can be known with a honeycomb framework. 7 boxes are used to describe the function of social media. These functions are identity, conversations, sharing, presence, relationships, reputation, and groups. The features that exist on a social media,

there must be at least 1 functionality out of 7 functions, but it is also possible, having more than one functionality [6].

Identity functionality is described by as arrangement or management of the user's identity in social media related to such as name, age, gender, location, photos and more.

Then the conversation functionality is a depiction of communication between one user and another user, to be simple a communication between two individuals. Sharing functionality, is the activity of exchanging, sharing, and receiving content that may contain between 3 types of data, namely text, images or videos. Presence is the ability or function by which users of social media can know that the other users of social media condition. Relationship is the shape of the functionality of

the relationships between users of social media. Other functionality is reputation functionality that used by users to find out the extent of other people's social status and content. The last functionality is a Group that describes social media users can create a community, sub-community, and others of the same type [6].

4.6 Social Media Feature

In Hao (2016), social media is part of web 2.0 revolution which is describe as content created by its users, online interaction & content sharing at social environment [20]. Then in Furqon (2018) state that in social media interaction there are 3 category data that are the most popular to be an object interaction in cyberspace, namely text, images and videos [9].

If seen all the features found from this systematic literature review, can be said that the average of the features found use these three types of data. Also, many from features found include at least one of the depictions of social media, which is the 2.0 revolution above, some even include all three at once.

The Systematic Literature Review resulted in a seven category of social media feature based of functionality which are identity, conversations, sharing, presence, relationships, reputation, and groups.

The Systematic Literature Review resulted in 24 features of social media. All the feature found is mapped with their functionality (see table 3)

4.7 Available Feature on Application

The applications examined in this study were 9 applications representing 9 cities / regencies in Indonesia. From the features obtained in the systematic literature review activity, an analysis of the e-government application feature can be done. The result from the analysis can be seen in Table 3.

Table-III: Feature Analysis

Feature	Pro Denpasar+	Qlue	Jakarta Aman	SImda	Sambat Online	Matur Bupati	LAKSA	Siaran	JSS
Blog	-	?	-	-	-	-	-	-	-
Check-in	-	-	-	-	-	-	-	-	-
Collaborative Editing Tools / Wikis	-	-	-	-	-	-	-	-	-
Comment	?	?	-	-	-	-	-	?	-
Event	-	-	-	-	-	-	-	-	-
Feedback	-	?	-	-	-	-	-	-	-
Forum	-	?	-	-	-	-	-	-	-
Friend	-	?	-	-	-	-	-	-	-
Friend List	-	?	-	-	-	-	-	-	-
Help	?	?	-	-	?	?	-	-	?
Like/Dislike	-	?	-	-	-	-	-	?	?
Microblogging	-	?	-	-	-	-	-	-	-
Newsletter / Newsfeed	?	?	?	-	?	?	?	?	?
Private Massaging	-	?	-	-	-	-	-	?	-
Real-Time Chat	-	?	-	-	-	-	-	-	-
Report	?	?	?	-	?	?	?	?	?
Sharing	?	?	?	-	?	?	-	?	?
Social Bookmarking	-	-	-	-	-	-	-	-	-
Status Update	-	?	-	-	-	-	-	-	-
Subscription / Follow	-	-	-	-	-	-	-	-	-
Tag	?	-	-	-	?	-	-	-	-
Video Conference	-	-	-	-	-	-	-	-	-
Virtual World	-	-	-	-	-	-	-	-	-
Wall Posting	-	?	-	-	-	-	-	-	-

V. DISCUSSION

This studies only found 24 features of social media by using systematic literature review. There are still many social media features that exist but not found in this study. So, it is possible that 9 e-government applications above have other features, which are not in table 2.

This study only finding feature based-on systematic literature review, and checklist the feature that available in 9 e-government application that being studied.

This study also finding social media feature categorization by using systematic literature review. The checklist method using writer experience using the application. E-Government application feature analysis can be used as an indicator about available feature. In the future, there is a chance that all the application that being studied, will be improve in their feature. Future research is needed to update the existing feature of the e-government application. Also, there is a possibility about finding another feature that not found in this study.

VI. CONCLUSION

The results of this systematic literature review get many features from social media, and found around 24 social media features. From all the features found, not all are available by each e-government application from the 9 cities / regencies. There are cities / regencies that have the same features, but each city / district all has different combinations of features. There are seven categories of social media feature based of functionality which are identity, conversations,

sharing, presence, relationships, reputation, and groups. Each features found was mapping into at least one of the social media feature function categories, so there is a chance that a certain feature has more than one category of feature.

From the results of the feature analysis in table 2, there are 17 features from 24 features found that available in studied application. Simda application from Karangasem Regency is an e-government application that has the least social media features found, because it is still an internal application from the Karangasem Regency government. So, there is no social media feature that available in this application. Whereas Qlue, that has the most features available, there are 16 features available from this application. From the analysis of social media features in e-government applications in 9 cities / districts in Indonesia, it might be possible to find out what features will be made in the future for similar applications.

For future research, more complex research methods can be used to analyse the use of features, features needed, and so on. Another thing to think about is the scope of the application that can be said to be social media or only have features like social media. The results of this study can be used as a simple indicator of the condition of e-government applications in 9 cities / districts in Indonesia in terms of the features available. The results of this study can also be used to compared with similar applications and may be used as a reference for available features in similar applications.

Table 3: List Feature

No	Feature	Functionality
1	Blog	Sharing, Conversation
2	Check-in	Identity, Presence
3	Collaborative Editing Tools/Wikis	Sharing
4	Comment	Conversation, Reputation
5	Event	Relationship, Presence
6	Feedback	Conversation
7	Forum	Sharing, Groups, Conversation
8	Friend	Relationship
9	Friend List	Presence, Relationship
10	Help	Conversation
11	Like/Dislike	Reputation
12	Microblogging	Sharing, Conversation
13	Newsletter/Newsfeed	Sharing, Conversation
14	Private Massaging	Conversation, Sharing
15	Real-Time Chat	Conversation, Sharing
16	Report	Conversation, Sharing
17	Sharing	Sharing
18	Social Bookmarking	Sharing
19	Status Update	Sharing, Presence
20	Subscription/Follow	Relationship, Reputation
21	Tag	Sharing
22	Video Conference	Conversation, Presence, Sharing
23	Virtual World	Conversation, Sharing, Relationships
24	Wall Posting	Sharing

REFERENCES:

1. Putra, I. G. L. A. R., & Swastika, I. P. A. (2016). Analisis Kerangka Kerja e-Government Assessment Pada Situs Website Pemerintah Daerah di Indonesia. Seminar Nasional Teknologi Informasi dan Komunikasi 2016 (SENTIKA 2016), 295-304.
2. Hardjaloka, L. (2014). Studi Penerapan e-Government Di Indonesia Dan Negara Lainnya Sebagai Solusi Pemberantasan Korupsi Di Sektor Publik. Jurnal RechtsVinding, 3(3), 435-452.
3. Haerana, Abdi, & Amartiwi, I. (2019). IbM Pelatihan Teknik Pengaduan Pelayanan Publik Berbasis E-Government Di Kecamatan Rappocini Kota Makassar. Celebes Abdimas: Jurnal Pengabdian Kepada Masyarakat, 1(1), 21-35.
4. Sitokdana, M. N. N. (2015). Evaluasi Implementasi eGovernment Pada Situs Web Pemerintah Kota Surabaya, Medan, Banjarmasin, Makassar dan Jayapura. Jurnal Buana Informatika, 6(4), 289-300.
5. Izzati, N. A., Pratama, A., Aristamy, I. M., Najwa, N. F., & Rakhmawati, N. A. (2018). Kategorisasi Jenis Interaksi Pemerintah Dan Masyarakat Serta Popularitas Media Sosial Pemerintah Daerah. Jurnal Sistem Informasi, 14(1), 1-8.
6. Rahadi, D. R. (2017). Perilaku Pengguna Dan Informasi Hoax Di Media Sosial. Jurnal Manajemen Dan Kewirausahaan, 5(1), 58-70.
7. Rita., Hutomo, K., & Natalia. (2013). Electronic Word of Mouth (e-WOM) Foursquare: The New Social Media. Binus Business Review, 4(2), 711-724.
8. Assegaff, S. (2017). Evaluasi Pemanfaatan Media Sosial sebagai Sarana Knowledge Sharing. Jurnal Manajemen Teknologi, 16(3), 271-293.
9. Furqon, M. A., Hermansyah, D., Sari, R., Sukma, A., Akbar, Y., & Rakhmawati, N. A. (2018). Analisis Sosial Media Pemerintah Daerah Di Indonesia Berdasarkan Respons Warganet. Jurnal Sosioteknologi, 17(2), 177-190.
10. Parsaorantua, P. H., Pasoreh, Y., & Rondonuwu, S. A. (2017). e-journal "Acta Diurna", 6(3).
11. Rachmawati, R., Ramadhan, E., & Rohmah, A. A. (2018). Aplikasi Smart Province "Jogja Istimewa": Penyediaan Informasi Terintegrasi dan Pemanfaatannya. Majalah Geografi Indonesia, 32(1), 14-23.
12. Irawan, E. P. (2017). Pemanfaatan Website Pada Aktivitas Cyber PR dalam Mendukung e-Government di Pemerintah Kota Tangerang Selatan. Jurnal Ilmu Pengetahuan dan Teknologi Komunikasi, 19(2), 163-177.

13. Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2012). Promoting Transparency and Accountability through ICTs, Social Media, and Collaborative E-Government. Transforming Government: People Process and Policy, 6(1), 78-91.
14. Charalabidis, Y., Loukis, E. N., Androutsopoulou, A., Karkaletsis, V., & Triantafillou, A. (2014). Passive crowdsourcing in government using social media. Transforming Government: People, Process and Policy, 8(2), 283-308.
15. Megawati, C. (2015). Analisi Aspirasi Dan Pengaduan Di Situs LAPOR! Dengan Menggunakan Text Mining. Depok (ID): Universitas Indonesia.
16. Fashoro, I., & Barnard, L. (2017). Challenges to the Successful Implementation of Social Media in a South African Municipality. SAICSIT '17 Proceedings of the South African Institute of Computer Scientists and Information Technologists, 13.
17. Pamungkas, B., & Hanathasia, M. (2016). Partisipasi Publik Via Teknologi Aplikasi: Solusi Qlue Menyambungkan Aspirasi Warga Jakarta. Indonesia yang Berkeadilan Sosial tanpa Diskriminasi, 699-711.
18. Gao, X., & Lee, J. (2017). E-government services and social media adoption: Experience of small local governments in Nebraska state. Government Information Quarterly, 34(4), 627-634.
19. Halpern, D., & Katz, J. E. (2012). From e-government to social network government: Towards a transition model. Proceedings of the 3rd Annual ACM Web Science Conference, 119-127.
20. Hao, X., Zheng, D., Zeng, Q., & Fan, W. (2016), How to strengthen the social media interactivity of e-government. Online Information Review, 40(1), 79-96.
21. Jaeger, P. T., Bertot, J. C., & Shilton, K. (2012). Access perspectives and design values in government social media usage. The Proceedings of the 13th Annual International Conference on Digital Government Research. 216-222.
22. Lee, G. & Kwak, Y. H. (2012). An Open Government Maturity Model for social media-based public engagement. Government Information Quarterly, 29(4), 492–503.
23. Mejabi, O. V., &   Fabgule, J. O. (2014). Engaging Citizens Through Social Media – How State Governors in Nigeria are Doing. ICEGOV '14, 85-88.
24. Shwartz-Asher, D., Chun, S. A., & Adam, N. R. (2016). Social Media User Behavior Analysis in E-Government Context. The 17th International Digital Government Research Conference.
25. Anindita, N. (2016). Elemen Sukses E – Government: Studi Kasus Layanan Aspirasi Dan Pengaduan Online Rakyat (LAPOR!) Kota Bandung. Bandung (ID): Universitas Katolik Parahyangan.
26. Tasmil. (2013). Pemeringkatan E-Government di Kota Makassar. Jurnal Pekommas, 16(3), 187-196.
27. Istiyanto, J. E., & Sutanta, E. (2012). Model Interoperabilitas Antar Aplikasi e-Government. Jurnal Teknologi Technoscientia, 4(2), 137-148.
28. Kurfali, M., Arifoglu, A., Tokdemir. G., & Pacin, Y. (2017). Adoption of e-government services in Turkey. Computers in Human Behavior, 66, 168-178.
29. Sangki, J. (2018). Vision of future e-government via new e-government maturity model: Based on Korea's e-government practices. Telecommunications Policy, 42(10), 860-871
30. Gathungu, J., & Mungai, A. N. (2012). Contextual Factors Affecting E-Government Strategy Implementation and Its Impact on Public Sector Performance in Kenya. Journal of Arts and Humanities, 1(1), 143-157.
31. Sutanta, E. & Mustofa, K. (2012). Kebutuhan Web Services untuk Sinkronisasi Data Antar Sistem Informasi dalam E-Gov di Pemkab Bantul Yogyakarta. Jurnal JURTIK - STMIK Bandung, 1, 39-48.
32. Rahardian, A. H. (2019). Revitalisasi Birokrasi Melalui Transformasi Birokrasi Menuju e-Governance Pada Era Revolusi Industri 4.0. Jurnal Ilmu Sosial dan Ilmu Politik, 9(2), 218-230.
33. Shwartz-Asher, D., Chun, S. A., & Adam, N. R. (2017). Knowledge behavior model of e-government social media users. Transforming Government: People, Process and Policy, 11(3), 456-475.
34. Husain, C. (2014). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Pembelajaran di SMA Muhammadiyah Tarakan. Jurnal Kebijakan dan Pengembangan Pendidikan, 2(2), 184-192.
35. Adinda, P. P., & Suzianti, A. (2018). Redesign of User Interface for E-government Application Using Usability Testing Method. ICCIP 2018 - Proceedings of 2018 4th International Conference on Communication and Information Processing, 145-149.
36. Adjei-Bamfo, P., Maloreh-Nyamekye, T., & Ahenkan, A. (2019). The role of e-government in sustainable public procurement in developing countries: A systematic literature review. Resources Conservation and Recycling, 142, 189-203.
37. Sánchez-Torres, J. M., & Miles, I. (2017). The role of future-oriented technology analysis in e-Government: a systematic review. European Journal of Futures Research, 5: 15.
38. Santa, R., Macdonald, J. B., & Ferrer, M. (2018). The role of trust in e-Government effectiveness, operational effectiveness and user satisfaction: Lessons from Saudi Arabia in e-G2B. Government Information Quarterly, 36(1), 39-50.
39. Warjiyono. (2013). Analisis Implementasi e-Government Pemerintah Daerah KAB. Tegal Berdasarkan Framework Deloitte Dan Inpres No. 2 Tahun 2003. Evolusi, 1(1), 69-75.
40. Irawan, B. (2013). Studi Analisis Konsep E-Government: Sebuah Paradigma Baru dalam Pelayanan Publik. Jurnal Paradigma, 2(1), 174-201.

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