The Crisis Communication in Using Artificial Intelligent to Face COVID-19 Pandemic in Indonesia

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Abstract

This paper explores the policy of crisis communication in the time of the pandemic using AI in handling COVID-19. Artificial Intelligent (AI) technologies and resources play a vital role which is used to recognize the virus and accelerating government efforts to combat COVID-19. The communication analysis is taking the vital use of AI throughout the crisis, where policymakers should encourage the sharing of information and policy for the citizens, also to communicate the information to support the decision-making process. The government faces some problems regarding the policy of crisis communication when the policies designed to tackle COVID-19 experience disobedience in the local governments and the community in implementing health protocols. This research employed a descriptive qualitative method based on the document study approach. The study results indicated that the government must also carry out a massive social campaign based on AI of related matters to COVID-19 conducted in a straightforward and easy to understand language, and if necessary, using the local language in the application base on AI to make it quickly digested down to a lower level of society.

Keywords: Artificial Intelligent, Crisis Communication, Indonesian Government, COVID-19

1. INTRODUCTION

The various policies concerning COVID-19 are institutionally divided into policies issued by the Central Government, Ministries or Non-Ministerial Institutions, and Local Governments. As a health crisis, COVID-19 has impacted many aspects in other sectors. A crisis can be defined as a turning point impacting drastic and permanent changes in an organization or a company. At this moment, the Indonesian Government solely formed a COVID-19 Task Force based on Presidential Decree No. 7 of 2020 concerning the Task Force for the Acceleration of Handling COVID-19. The formation of the COVID-19 Task Force at the central level was then followed by the formation at the regional level. These teams are supposed to work responsively, fast, precise, and perform transparent government communication before, during, and after the crisis. The updated report on 27 November 2020 shows that statistical data of COVID-19 in the world is increasing with 220 countries affected, confirmed cases 60.264.241, and died 1.420.306 people. While Indonesia has confirmed cases of positives as much as 522.581, recovered of 437.456, and deceased as much as 16.521. [1, 2].

On another hand, the Indonesian government has started to implemented Artificial Intelligent by launched some technology platforms to detect the variety of COVID-19 impacts around Indonesia [4,5,6]. Since the platform has started running well at this moment, this research will analyze how the communication policy of government through an online platform can be a solution for handling COVID-
by using Artificial Intelligent. Also, this research wants to know how the respond of society to face this situation.

2. **LITERATURE REVIEW**

*The Policy of Crisis Communication and AI in Handling COVID-19*

According to G. Harisson, crisis communication is a Public Relations activity in providing information relevant to a crisis and opening open communication channels [7]. Crisis communication broadly includes collecting, processing, and disseminating information required to overcome crises [12].

The objectives of crisis communication consist of (a) reducing the risk of public panic, (b) reducing public anxiety, (c) reducing speculation, especially in the early days of the crisis, (d) protecting companies or organizations from speculative criticism, which usually emerges from public discourse in the mass media, (e) trustworthy (accountability) and openness (disclosure) communication based on a balance of interests, and (f) minimizing damage to the image of the organization [7].

Management of crisis communication has four stages comprising prodromal, acute, chronic, and a resolution [12]. The prodrome stage begins when there are signs of a crisis. The acute stage takes place when a crisis is announced, which is the shortest stage. The chronic stage is during times of crisis. The resolution stage is where the crisis has subsided. Within these four stages, the five keys to effective media communication must be fulfilled to achieve effective media communication during the COVID-19 pandemic. According to Matthew Seeger, effective media communication during the COVID-19 pandemic, as stated by *The Centers for Disease Control and Prevention* (CDC), requires five keys, namely: credible, honest, open, and consistent source of information compiled based on expert opinion aimed to persuade people to take actions to reduce the danger of contracting [15].

According to Ardianty, the source of the message must be credible, meaning that it can be trusted and delivered by an expert [16]. The disclosure of information embodied in the government should conduct convincing communication without exaggeration [17].

*The Use of AI in Handling COVID-19*

Further, to solve this crisis of communication of government in delivering the policies against covid-19, many experts suggest that AI is imperative things that policymakers must ensure that AI systems are trustworthy and should respect human rights [18]. AI tools and technologies can be employed to support efforts of policymakers, to communicate the policy with the medical community, and society at large to manage every stage of the crisis and its aftermath: detection, prevention, response, recovery, and to accelerate research [18, 19].
Figure 1. Examples of AI application at different stages of the COVID-19 crisis (OECD, 2020)

The AI has been used by the Minister for Research and Technology, giving the COVID-19 Task Force is for quicker detection and diagnosing of the disease. Indonesia has been leading in AI adoption in Southeast Asia According to a study by IDC. AI adoption rate in Indonesia tops 24.6 percent, higher than that of Thailand (17.1 percent), Singapore (9.9 percent), and Malaysia (8.1 percent) [20].

3. METHOD

This research on communication analysis of the Indonesian Government on the COVID-19 pandemic crisis utilized a qualitative descriptive approach. Qualitative research is a perspective emphasizing the characteristics and quality of an object or related subject [21]. The reason researchers employed the Pasalong model because this method is used for public administration research regarding government policies in crisis communication in handling COVID-19. Secondary data was utilized as the data collection technique. Secondary data in question refers to collecting literature reviews, journal articles, and other government communication sources in handling COVID-19. The research is using the NVivo application to analyze how the communication through the online platform to seek information regarding the pandemic situation of COVID-19 in Indonesia.

4. RESULTS AND DISCUSSION

The government is facing the COVID-19 pandemic with a digital approach that is carried out through the development of applications based on artificial intelligence (AI) and big data. In the AI Detection of COVID-19 application, there is a feature to detect the coronavirus with data such as ct-scans and x-rays. This feature is also supported by a knowledge growing system (discoveries in the field of AI) and a geospatial epidemiology system (distribution of health geography), making it easier for the public to find out the coronavirus' condition in the region. The application can also record the user's corona test history to make it easier for the public to take care of information or travel requirements. Multicenter Clinical Trial itself is an application developed to support data processing, management, monitoring, and auditing of clinical trials with one or multiple centers. Based on the result analysis in this paper, we are collecting some information through online newspaper under the collaboration with the government and found that the government communication during the pandemic is still lacking in some areas and there is a sentiment regarding the government’s performance to face this global situation. As mentioned in Figure 2, showing that the government gets some response from society in negative sentiment, this result is also supported by the fact that many companies are bankrupted and have large work termination. This pandemic situation has affected many district and economic fundamentals for all of the sectors in Indonesia.
Figure 2. The sentiment communication in Indonesia during pandemic COVID-19

Source: Primary data using NVivo-12

Regarding the data used in Figure 2, those are the most given sentiments by the society regarding COVID-19 handling by the government. Either the society complaining the responsiveness of government or the services. Another example of the application of Artificial Intelligence in Application Development is Public Mobility Monitoring. This works using CCTV on the street receives real-time video, then processes the data, and releases insights. At the time of COVID-19, CCTV was used to see in certain areas whether cars or people were still out. This data is then displayed in the form of a dashboard on the website. Besides that, there is also Social Distance Monitoring. Receiving data input from CCTV as well, then the algorithm will detect whether these people are at a safe or unsafe distance from each other. There is a Face Mask Detection Alert, plus facial recognition. There is a mask classifier which can then detect whether everyone's face has worn a mask or not. In the health sector, there are innovations to classify images from X-rays and MRI. Also, related to drugs [24].

Nevertheless, until now, the government has low utilization of these applications as part of the community's health literacy effort as part of government policy. The observation results revealed that the Indonesian Government’s crisis communication during the COVID-19 pandemic was less structured and did not implement an effective crisis communication management system in promoting communicating with citizens using AI Applications that have been established. It can be seen at the beginning of the COVID-19 issue in Wuhan at the end of 2019, and the government did not pay attention to the prodromal stage, where it should have realized the initial signs of facing the COVID-19 crisis. When other countries were stricken with COVID-19, the Indonesian Government established counterproductive policies related to tourism. The government provided discounts for tourists to boost tourist visits to Indonesia. It also spent much money giving airplane discounts to several Indonesian tourist destinations and mobilized influencers campaigning that Indonesia was fine and safe from COVID-19. It was clear that the appropriate stage of crisis communication management was neglected because the Indonesian Government has not financially prepared to prevent the COVID-19 crisis communication from spreading by providing awareness at an early stage.

None of the government’s steps in dealing with the COVID-19 crisis went through the ideal crisis communication management stages. The researchers considered that the government did not have a sense of crisis, thereby unaware of the prodromal stages in which other countries began experiencing a massive outbreak, a sign of an emerging crisis. The Indonesian Government was also slow in preventing the spread of COVID-19 as no immediate action was taken, such as the regional quarantine policy.
Besides, the Indonesian Government seemed to “underestimate” the COVID-19 crisis with statements of officials as if Indonesia was safe from COVID-19 and the Indonesian people were immune to such a disease. Budi Karya, the Minister of Transportation, reported by Republika.co.id, once mentioned, “What would happen if the Indonesian people were immune to COVID-19 because they love consuming wrapped rice?” [25]. Even though it was just a joke, the Indonesian Government as a communicator, facilitator, and mediator for the community during the crisis, should have a significant role in providing information, education, and massive socialization concerning COVID-19 to prevent people from being panic and to remain alert to the disease.

Furthermore, the government did not pass the acute stage of the communication management crisis as it was slow and did not carry out appropriate communication to announce the inclusion of COVID-19 in Indonesia. As a result, Indonesia was at an acute stage when announced, causing more panic and the spread of confusing news. Apart from being slow in responding to the COVID-19 pandemic crisis, the government was inconsistent in conveying crisis communication messages to the public. The inconsistency of the statements made by the government, for example, was related to the different large scale of social restrictions (PSBB) policies. Moreover, it was also related to the rules of returning to hometown, thus confusing the community.

The data from the Republika and Kompas news revealed that the statement of the President and the Minister did not deliver the same tone and signaled to be inconsistent and late in delivering messages relevant to PSBB policy. Minister Luhut said that the PSBB could be relaxed in several regions [26]. However, President Jokowi emphasized that there had been no easing of the PSBB [16]. In addition to the PSBB policy confusing the public, it coincided with the moment of Eid al-Fitr, considering that Indonesia is a Muslim-majority country, it has a culture of returning to hometown or commonly called Mudik. It has led to confusion over the homecoming policy conveyed by the Indonesian Government, considered inconsistent. It resulted in people being confused and panic when the COVID-19 crisis occurred. This slow and inconsistent action certainly violated the crisis communication principle that should be passed, as stated by Combs [9].

Figure 3. Word Cloud Analysis of Society Communication during COVID-19

As showed in figure 3, the Indonesian Government has not implemented effective media communication in the COVID-19 pandemic, which according to Matthew Seeger as stated by The Centers for Disease Control and Prevention (CDC), requires five keys: credible, honest, open, and consistent source of information based on expert opinion, aimed to persuade people to take actions to reduce the risk of infection [15].

During this chronic crisis, the government made mistakes as it was reluctant to disclose information on the distribution data and the number of COVID-19 victims. It impacted public panic and the ease of propagation of fake news or hoaxes. The untransparent information had significant implications on the data distribution, resulting in the panic and confusion of information in society. From January 23 to April 6, 2020, the Ministry of Communication and Information (Kemenkominfo) had identified 1,096 hoax issues of COVID-19 spread through digital platforms [27].
Participatory communication in crisis communication is essential as it provides opportunities for the community to produce and manage COVID-19 information independently. This participatory communication can also reduce hoaxes frequently circulate in the community during this COVID-19 pandemic [27]. Through this participatory communication, the community played a more significant role in managing COVID-19 information to make people smarter, more empowered, and not easily believe in hoaxes. Through participatory communication, of course, communication will play a vital role in changing people’s behavior to the lowest level.

Furthermore, the purpose of crisis communication in facing the COVID-19 is to change people’s behavior to be aware of cleanliness and health. Therefore, the government’s crisis communication must also carry out a massive social campaign on matters related to COVID-19. The Indonesian Government has carried out a social campaign to prevent the spread of COVID-19, but the language used has not represented a social campaign that can be accepted by all society levels. It can be seen from the language used by the government, such as keeping a safe distance with the terms social distancing, physical distancing, and new normal. The social campaign message will be easily understood and accepted by the community if carried out in straightforward and easy-to-understand language, if necessary, using the local language to make it quickly digested down to the lowest level of society. Besides, the Indonesian Government should consider communicators as messengers to gain trust, and the public can effectively receive messages. The government can involve community leaders, religious leaders, informal leaders, traditional leaders, cultural leaders, or influencers in communicating messages in dealing with COVID-19 to invite them to maintain cleanliness and health and deliver messages to prevent COVID-19.

Moreover, the government can also make those community leaders effective communicators who can strengthen messages in disseminating educational and persuasive messages about COVID-19, its prevention, and various government policies that the whole community must comply with. It is urgent that the Indonesian people, as communicants, do not panic and are not confused. Thus, the public can judge that the government as a communicator has a positive reputation in the eyes of the public at the time of the crisis because it has communicated informative, educative, and reliable messages. The implication is that the public remains calm and vigilant in fighting COVID-19 by continuing to be active without leaving health protocols, namely using masks, maintaining physical distance, washing hands, and avoiding crowds. Efforts in crisis management, such as crisis communication management, crisis communication principles, and social campaigns for behavior change, are the necessary foundations that the Indonesian Government must improve and implement to reduce the number of COVID-19 cases.

5. **Conclusions**

The use of AI to communicate government policies regarding Covid-19 is still low. The Indonesian government needs to be more utilize information technology (IT) systems based on big data to georeferenced, health data, and social distancing monitoring as a mitigation measure in dealing with the Covid-19 outbreak in Indonesia. This is done so that artificial intelligence (AI) can process extensive data so that it can make concrete decisions and have a broad impact. A crowdsourcing-based technology is important to be applied to collect data from the wider community. Crowdsourcing means that data collection is carried out through a collection of data taken from a large group of people.

Indonesia is one of the countries affected by the COVID-19 outbreak, and the Indonesian Government has determined the case as a national crisis. The observation results revealed that the Indonesian Government’s crisis communication during the COVID-19 pandemic was less structured and did not implement an effective crisis communication management system using AI. The government did not pay attention to the prodromal stages for crisis prevention and did not prepare for the acute stage. It resulted in a chronic crisis with a direct hit in Indonesia, making it difficult to quickly reach the resolution stage. Moreover, the government did not implement crisis communication principles, namely fast, consistent, and open. Hence, circulating communication made people panic and had implications for hoaxes.
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REFERENCES

[1] Worldometers Info. (2020). Coronavirus Updates. Worldometers Info, 8 Juni <https://www.worldometers.info/> accessed on 27 November 2020.
[2] Data Sebaran (2020) [Accessed 27 November 2020]
[3] Coombs, W.T. (2010). Parameters for Crisis Communication. In W.T. Coombs & S.J. Holladay (Eds.), The Handbook of Crisis Communication. West Sussex: Wiley-Blackwell.
[4] Desi K. (2020) 7 Aplikasi Pelacak Virus Covid-19, Dua di Antaranya Buatan Indonesia. https://www.malangtimes.com/baca/52286/20200507/182800/7-aplikasi-pelacak-virus-covid-19-dua-di-antaranya-buatan-indonesia
[5] CNN Indonesia. (2020). RI Bisa Tiru Sistem IT Corona Korsel, Tapi Minim Koordinasi. https://www.cnnindonesia.com/tekno/20200416141620-185-494182/ri-bisa-tiru-sistem-it-corona-korsel-tapi-minim-koordinasi
[6] Kominfo. (2020). Berbekal Teknologi, Perangi Pandemi. https://www.kominfo.go.id/content/detail/25648/berbekal-teknologi-perangi-pandemi
[7] Kriyantono, Rachmat. (2015). Public Relations & Crisis Management (Pendekatan Critical Public Relations Etnografi Krisis &Kualitatif). Jakarta: Kencana.
[8] Nova, Firsan. (2011). Crisis Public Relations. Jakarta: RajaGrafindo Persada.
[9] Coombs, Timothy W. (2006). “Crisis Management: A Communicative Approach”. Public Relations Theory II. Carl H. Botan & Vincent Hazeltun (eds.). Mahwah: Lawrence Erlbaum Associates.
[10] Harrison, G. (2005). Communication Strategies as a Basis for Crisis Management Including Use of the Internet as a Delivery Platform. Dissertation. Georgia: Georgia State University.
[11] Fearn-Banks, K. (2007). Crisis Communications: A Casebook Approach. New Jersey: Lawrence Erlbaum.
[12] Coombs, Timothy W. and Sherry, J. H. (2010). The Handbook of Crisis Communication. United Kingdom: Blackwell.
[13] Coombs, Timothy W. (2006). “Crisis Management: A Communicative Approach”. Public Relations Theory II. Carl H. Botan & Vincent Hazeltun (eds.). Mahwah: Lawrence Erlbaum Associates.
[14] Glik, Deborah. (2007). Risk Communication for Public Health Emergencies. Annual Review of Public Health Vol. 28:33–54, USA: School of Public Health, University of California.
[15] Seeger, M., “The Conversation”, 7 Maret 2020. <https://theconversation.com/crisiscommunication-researchershares-5-key-principles-that-officials-should-use-incoronavirus-133046> access on 31 Maret 2020.
[16] Ardiyanti, H. (2020). Komunikasi Media yang Efektif Pada Pandemi Covid-19. Info Singkat, 12 (7), 25-31.
[17] Sandman, P. M. (2004). <https://www.psandman.com/handouts/AIHA/page13.pdf> access on 1 April 2020.
[18] OECD. (2020). Using Artificial Intelligence To Help Combat COVID-19. https://www.oecd.org/coronavirus/policy-responses/using-artificial-intelligence-to-help-combat-covid-19-9ae4c321
[19] Budiarto, Teguh Eko. (2020). Artificial Intelligence Has Role To Play In Enforcing COVID-19 Health Protocol. https://www.thejakartapost.com/life/20200826/artificial-intelligence-has-role-to-play-in-enforcing-covid-19-health-protocol.html
[20] Fabio Tiviti (2020). Rise of the Citizen Data Scientist: AI Analytics in a New Normal. https://jakartaglobe.id/opinion/rise-of-the-citizen-data-scientist-ai-analytics-in-a-new-normal
[21] Pasalong, Harbani. (2012). Metode Penelitian Administrasi Publik. Bandung: Alfabeta.
[22] Sugiyono. 2012. Metode Penelitian Kuantitatif, Kualitatif dan R & D. Bandung: Alfabeta.
[23] Faris Rahman, (2020). Inovasi lewat Artificial Intelligence untuk Membantu dalam Masa Pandemi COVID-19. https://sis.id/blog/inovasi-lewat-artificial-intelligence-untuk-membantu-dalam-masa-pandemi-covid-19/
[24] Natalia Patri Ninda Budi, (2020). Pemerintah Kembangkan Aplikasi Berbasis AI dan Big Data Untuk Hadapi COVID-19. https://www.cloudcomputing.id/berita/pemerintah-hadapi-corona-dengan-pendekatan-digital
[25] Saubani, Andri. (2020). Kelakar Menhub: Kita Kebal Corona Karena Doyan Nasi Kucing. Republika.co.id, 17 Februari. <https://republika.co.id/berita/q4ul4k4k09/kelakar-menhub-kita-kebal-corona-karena-doyan-nasi-kucing> access on 20 Mei 2020.
[26] Kurnia, Ade Miranti. (2020). Kata Luhut, PSBB Bisa Dilonggarkan di Kota-Kota Ini, Kompas.co, 15 Mei. <https://money.kompas.com/read/2020/05/15/034800426/kata-luhut-psbb-bisa-dilonggarkan-di-kota-kota-ini?page=all> access on 20 Mei 2020.
[27] CNN Indonesia. (2020). Kominfo Catat 1.096 Hoaks di Medsos, Terbanyak Facebook. CNN Indonesia, 8 April. <https://www.cnnindonesia.com/teknologi/20200408155307-185-491726/kominfo-catat-1096-hoaks-di-medsos-terbanyak-facebook> access on 20 Mei 2020.

[28] R. Setiawan and M. Mahadiansar, “Forecasting Analysis : The Riau Islands Local Government Role In Covid-19 Disaster Management,” J. Stud. Pemerintah., vol. 11, no. 3, 2020.