Policies for controlling the covid-19 pandemic through social media communications by the East Kalimantan provincial government

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ABSTRACT

During the Covid-19 outbreak, social media became the home for all sources of information for the use of social media due to limited public activities outside. Social media can be used well with innovation and information conveyed to the public; the public uses social media as a general information channel, especially Twitter. This study aims to find information related to the Covid-19 pandemic control policy through social media communication by the East Kalimantan Provincial Government. This study uses a qualitative method, QDA Miner or qualitative data analysis miner Nvivo 12 Plus, which analyzes content, network, and word cloud. The two Twitter accounts that are the source of data in this study are the official account of the Provincial Government of East Kalimantan @Pemprov_Kaltim, and the official account of the Office of Communication and Information Province East Kalimantan @Kominfokaltim. The findings of this study indicate that the Twitter social media account of the East Kalimantan Provincial Government has a function as a crisis mitigation and management tool. Twitter's social media account with high intensity is the @kominfokaltim account with a difference in the number of tweets that is not much different from the @Pemprov_Kaltim account and the monthly Twitter intensity of the @kominfokaltim Twitter social media account, which is more intense every month in providing information. Information content based on analysis using Nvivo 12 Plus shows that the information conveyed during the Covid-19 outbreak is directly related to policies for handling and growing Covid-19 cases in East Kalimantan.

1. Introduction

Covid-19 in Indonesia in the last two years has experienced an increase in overall cases, but at the beginning of 2021, the number of daily cases was not so significant; the decrease in daily cases was based on government policies in handling Covid-19 in Indonesia [1]. in the Covid-19 handling period, the Indonesian government has issued a policy of preventing and recovering economic conditions, besides that several actions were taken to create new normal conditions so that community activities can run according to health protocols [2]. This condition brings public reactions to the increasing development of Covid-19; the forms of these reactions are trauma, fear, and so on. Erku et al. (2021) the public's response to the global Covid-19 condition is based on new cases increasing every day throughout the country. The form of expression for Covid-19 arises because the handling of Covid-19 has not been maximized [4].

During the Covid-19 outbreak, social media became a home for all sources of information for social media users due to limited public activities outside [5]. Therefore interactions on social media became active with a variety of information. However, according to Rosenberg et al. (2020), social media can test and filter information between hoaxes or not with no restrictions on any information disseminated. Data dissemination shows that not all Covid-19 information can be trusted [7]. The spread of Covid-19 information conveyed through social media is based on several factors such as existence, entertainment, and exploration carried out by social media users [8]. These factors indicate that social media users are characteristically delivering and communicating they are providing information [8].

Social media has become one of the media to express a public opinion on the Covid-19 condition, but in its function, each social media has different types of information [9]. Communication is closely related to the states, but the information conveyed is not uncommon as misinformation spreads simultaneously with correct details [10]. This kind of information creates sentiment on social media [11]. The sentiment was born from the media frame for the Covid-19 issue; this form of information can be categorized as favorable information and negative information on social media [12]. However, social media also has a function as a mitigation and risk communication tool in crisis conditions, meaning that social media is a tool that filters information that is widely spread [13], especially Covid-19 information that was conveyed widely through social media during the outbreak this is going on.

In the latest research, the function of social media as a communication tool during Covid-19 have different parts; such as communication and coordination tools [7], risk communication [10], medical news [14], misinformation shearing [8], discussion of covid-19 policies through social media [4], or as a communication medium for health organizations whose functions are the same as functions in general but focus more on public communication to increase community participation [15]. From these studies, Rosenberg et al. (2020) consider a need to test the information submitted so that social media users can also counter fake news. This step is an act of misinformation check to become accurate information [16]. Thus information becomes essential and much needed in these conditions [17].

Based on the above explanation and the latest research on the function of social media during the Covid-19 pandemic, this study aims to explore information related to the Covid-19 pandemic control policy through social media communication by the East Kalimantan Provincial Government, explore information spread across the mine through several social media accounts Twitter East Kalimantan Provincial Government. This study describes the policy interaction model that occurred during the Covid-19 control period by the East Kalimantan Provincial Government. By paying attention to the function of social media, the author proposes an in-depth analysis of the activities of each account of the government of East Kalimantan Province. This analysis follows the process described in recent research on the function of social media as a communication tool that can involve anyone [18] so that this research will provide practical benefits, namely to find out how the communication of Covid-19 handling policies is carried out by the East Kalimantan Provincial Government, besides that it can provide help to all parties to maximize the use of social media as an effective means of communication in crises.

2. Theoretical Framework

2.1. Social Media Concept and Public Policy Information

Antony (2008) social media is a modern communication tool, which uses electronic communication networks and can connect anyone [20]. Social media is a form of progress in Web 2.0 where users can provide a variety of information [21]. The function of social media is closely related to human activities [22]. Therefore social media is a communication medium that must be owned. Social media functionally can provide access to users through electronic devices so that electronic users can obtain information quickly [23]–[25]. Currently, the function of social media has developed into a primary communication tool for everyone and contributes to changes around them [26]. Belkahla Driss et al. (2019) assessed that social media could be appropriately used with innovation and information conveyed to the public. Public information uses social media as a general information channel [28], the information in it is an incident that occurred at that time.

Therefore social media has become a public information channel to report events and actions that are currently a big issue [29].

Basically, Policy communication is a communication carried out by stakeholders, which is the government. It is then interpreted as an effort to provide information related to programs and ideas produced to the community to achieve the goals of these programs and ideas. Nurati (2016) considers policy communication to make it easier for policy implementers and targets to understand each other and produce the desired results. Amid the current situation of information technology advancement, social media is one of the digital media groups that can simplify social connections so that it can provide data for stakeholders regarding what the public says about what the government has done [29], [31], [32].

2.2. Interaction on Social Media during COVID-19

Covid-19 information during the pandemic can describe the situation faced by the community through the rapid dissemination of information, Ahmed et al., (2019) Twitter social media provides a space for users to share information, creating interactions during the H1N1 outbreak conditions. Still, these interactions are a form of support for the government and health workers [34]. Therefore, social media twitter provides a role for anyone to be involved, both organizations and individuals, to offer to understand [35]. The information submitted can provide the public with the condition of Covid-19 and counter misinformation about Covid-19 [36]. The form of interaction conveyed influences interactions that occur on social media [37], such as health services [38] and sentiment information that arises as a result of these services [39].

Scholar has grouped several social media functions so that social media can be mapped functionally to determine the character of information, for example as a monitoring tool for activities [40], the development of new cases and total cases [41], and can also serve as a primary source of information on Covid-19 [42]. So that the data collected through Twitter social media can be analyzed to ensure the character of the information in it [43], [44]. Social media users as a means of disseminating information greatly affect the behavior of social media users [45]. Therefore, the data's character impacts the handling of Covid-19 either negatively or positively [46].

3. Method

This study uses qualitative methods, and we believe that communication through social media builds a network between every user on Twitter social media [47]. Therefore, this study uses a qualitative approach to explore how social media users respond to the policies implemented by the East Kalimantan Provincial Government. A qualitative approach is used to examine the information available on Twitter social media with a structured method [48]. This approach can be referred to as a QDA Miner or qualitative data analysis miner used in the content, network, and word cloud analysis. Exploring the information on Twitter social media with a large size requires tools as a tool [49].

Nvivo 12 Plus is a programming computer assistant that can assist researchers in understanding qualitative data further [50]. This study answers a problem formulation related to the Covid-19 pandemic control policy through social media. Data collection in this study uses Google's N-capture, a tool for capturing data, then the resulting data can be processed on Nvivo 12 Plus. This study chose the official Twitter account of the East Kalimantan Provincial Government, which provides information regularly. The two Twitter accounts that are the source of data in this study are the official account of the East Kalimantan Provincial Government @Pemprov_Kaltim and the official account of the East Kalimantan Province Communication and Information Office (Diskominfo Kaltim) @Kominfokaltim. This study selected two official accounts of the East Kalimantan Provincial Government, which routinely controls the Covid-19 pandemic in East Kalimantan Province.

RQ1: How has the communication policy for controlling the Covid-19 pandemic been carried out by the East Kalimantan Provincial Government?

4. Results and Discussion

The results of this study are divided into two parts; The first is to look at the intensity of each account's activity in disseminating information on Twitter social media during the Covid-19 pandemic. Then proceed with findings and discussions related to the policy issue of controlling the Covid-19 pandemic, which has been carried out through two Twitter social media accounts by the East Kalimantan Provincial Government.

4.1. Account intensity in information dissemination

In disseminating good information, it is necessary to pay attention to the clarity of the information conveyed and the sustainability of the information provided. The intensity of the activities of the East Kalimantan Provincial Government in the use of Twitter social media can give an illustration of how far the East Kalimantan Provincial Government has made efforts in disseminating policy information related to controlling the Covid-19 Pandemic. Figure 1 shows the functional level of two accounts @Pemprov_Kaltim and @kominfokaltim. Each account during its busy period has generated more than 3000 tweets. The @kominfokaltim account generated a total of 3249 tweets with a total of 3184 tweets and 65 retweets. Meanwhile, the @Pemprov_Kaltim account generated a total of 3200 tweets with 3182 tweets and 18 retweets. Each account's high number of tweets indicates that the two accounts have independently produced tweet content. The resulting tweet content can later create identity and self-representation to describe the function and role of an account [51].

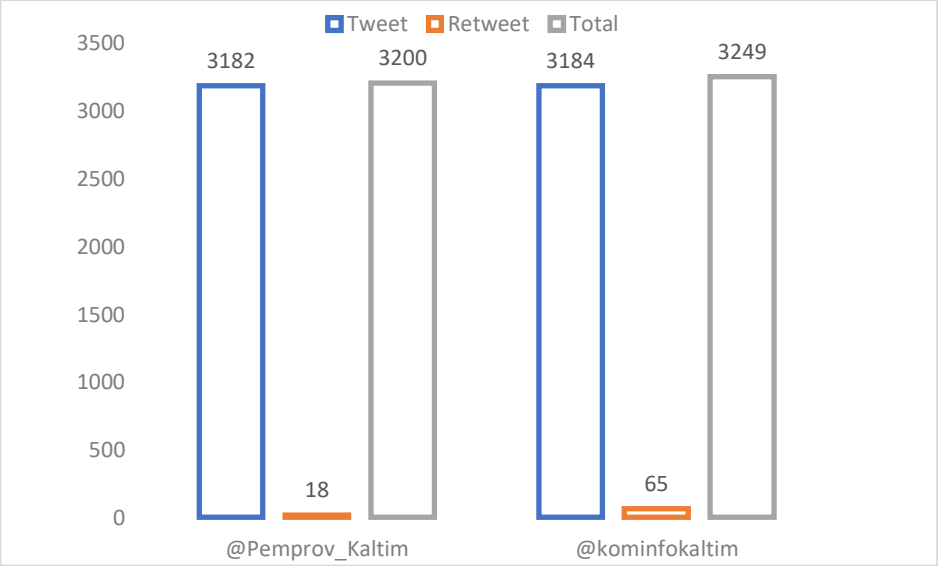
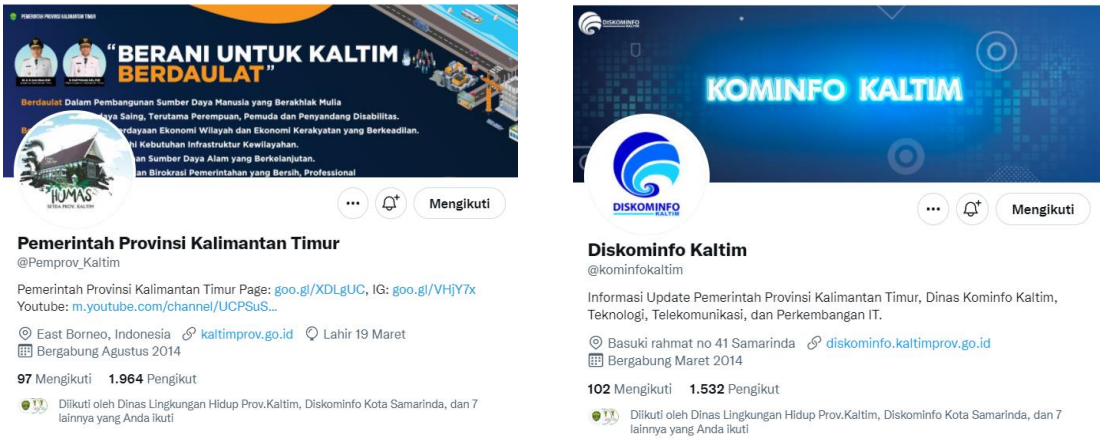


Fig. 1. The intensity of Tweet Type. (Source: Nvivo 12 Plus, 2021)

The intensity of the information in the picture explains the information conveyed by the two accounts during the Covid-19 policy, as information channels for the two accounts to become information channels that provide information about Covid-19 at any time. But between the two have different intensities [29]. Social media is the primary communication tool used by all agencies [26], The East Kalimantan government has a social media account as a medium for providing information, from figure 2, showing the strategic position of social media, especially for government agencies.

Information dissemination activities on each account have been running for several years. On the @Pemprov_Kaltim account, the activity of using Twitter social media has been carried out since August 2014. Meanwhile, the @kominfokaltim account had joined earlier to use Twitter social media, namely in March 2014, five months before the East Kalimantan Provincial Government had a Twitter account. Figure 2 shows the display of each Twitter account, which also indicates that each account has been linked to the official website of the East Kalimantan Provincial Government and the official website of the East Kalimantan Diskominfo.



@Pemprov_Kaltim @kominfokaltim

Fig. 2. Account profile view. (Source: authors, 2021)

The intensity of each account in providing information in each quarter can also be seen in more detail in Figure 3 below. Since the July-September 2020 quarter, the operational level of the @kominfokaltim account far exceeds the @Pemrov_Kaltim account in generating tweets, and the same thing is shown until the end of the October-December 2020 quarter. In 2021 it was found that the activity of the @Pemprov_Kaltim account experienced a drastic decline in the quarter. January-March 2021 so that it only generated 85 tweet activity and after that, it was not active again in developing tweets and retweets. The cause of the inactivity of the @Pemprov_Kaltim account certainly has a reasoned reason, and in the future, further research is needed to find out the cause of the passivity of the account by future researchers.

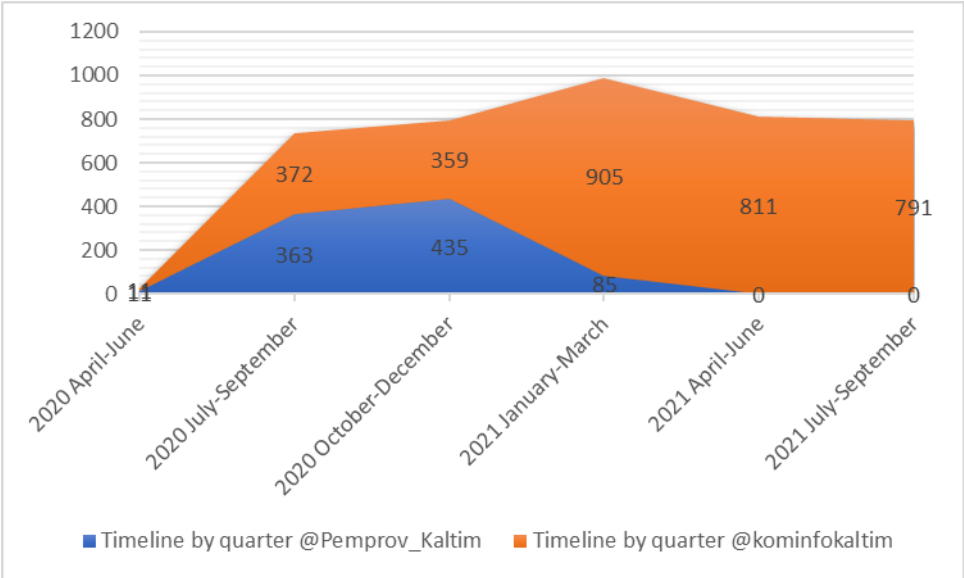


Fig. 3. The intensity of quarterly information. (Source: Nvivo 12 Plus, 2021)

4.2. Policy information regarding Covid-19 control

Information is a vital component in the achievement of a policy; not infrequently, a policy does not run smoothly because the information submitted is inadequate, affecting the results achieved. The various tweets generated by the @Pemprov_Kaltim account and the @kominfokaltim account have produced different kinds of information that social media users can obtain. Figure 4 shows the keywords of information that dominate as long as the two versions are active in tweeting and retweeting activities. Using qualitative content analysis (QCA), we thoroughly analyze the results of tweets mined from the @Pemprov_Kaltim account and the @kominfokaltim account, which are then displayed as word frequency to represent the theme of the information present in both versions.

The frequency of words in the @Pemprov_Kaltim account is dominated by information about things related to the activities of the East Kalimantan Provincial government, which is indicated by several keywords, namely "Kaltim," "Governor," and "#Pemprovkaltim." Meanwhile, the @kominfokaltim account produces a frequency of words that are dominated to represent every institutional activity that is carried out, illustrated by the keywords "#sobatkom", and "#dikominfokaltim". In addition, as an institution responsible for communication and information in East Kalimantan Province, the @kominfokaltim account is also continuously accountable for providing information related to developments in East Kalimantan Province. Therefore several keywords are present to represent the theme of the information provided, such as "East Kalimantan," "Kalimantan," and "Province".

Fig. 4. Each account's word frequency. (Source: Nvivo 12 Plus, 2021)

Overall, Figure 4 has presented the word frequency related to the information theme of the two accounts. Next, we try to dig deeper into the extent to which each account produces information related to the Covid-19 theme. The more tweets made by certain accounts in carrying out an issue, the more effective branding will be [52]. because it is believed that an information character can have an impact on the handling of Covid-19 in both a negative and positive form [46]. The QDA Nvivo 12 Plus software was used to help us categorize the themes of the information generated to generate the data. Table 1 shows that each account has produced information related to the Covid-19 theme. For the @kominfokaltim account, there are 206 tweet references associated with the Covid-19 theme by generating 6452 words and covering 21.01% of the overall theme information generated by the @kominfokaltim account. Meanwhile, the @Pemprov_Kaltim account produced 99 reference tweets related to the Covid-19 theme by generating 2973 words and covering 12.38% of the full theme information generated by the @Pemprov_Kaltim account.

Table 1. Covid-19 themed categories in each account

Name Account	Covid-19 Theme		
	Coding References	***Word Coded***	***Percentage With Other Themes***
Diskominfo East Kalimantan (@kominfokaltim)	206	6452	21,01%
East Kalimantan Provincial Government (@Pemprov_Kaltim)	99	2973	12,38%

[a.] Source: processed by Nvivo 12 Plus

References tweets generated by the @Pemprov_Kaltim account related to the Covid-19 theme are far less than the references tweets generated by the @kominfokaltim account. This shows a tendency that in providing information related to Covid-19, the East Kalimantan Provincial Government is more centered on the East Kalimantan Provincial Communication and Information Office as a funnel of information regarding the development of the situation in handling Covid-19.

In addition, the inactivity of the @Pemprov_Kaltim account in the last few quarters has also impacted the decrease in the resulting Covid-19 policy information.

We continue a more careful analysis of the coding references generated to provide an overview of the Covid-19 pandemic control policies that each account has submitted. Figure 5 shows the frequency of words generated by each account. The @Pemprov_Kaltim account raises several dominant keywords, namely "Covid", "Kaltim", "Handling", Acceleration", "Task Force", "Case" and "We". Meanwhile, Figure 5 also shows the frequency of words generated by the @kominfokaltim account, the @kominfokaltim account produces several dominant keywords namely "Covid", "Case", "Kaltim", "Positive", "Handling", "Task Force", and "Patient". These keywords provide an overview of how far the East Kalimantan Provincial Government has used social media as a space to communicate Covid-19 control policies in East Kalimantan Province.

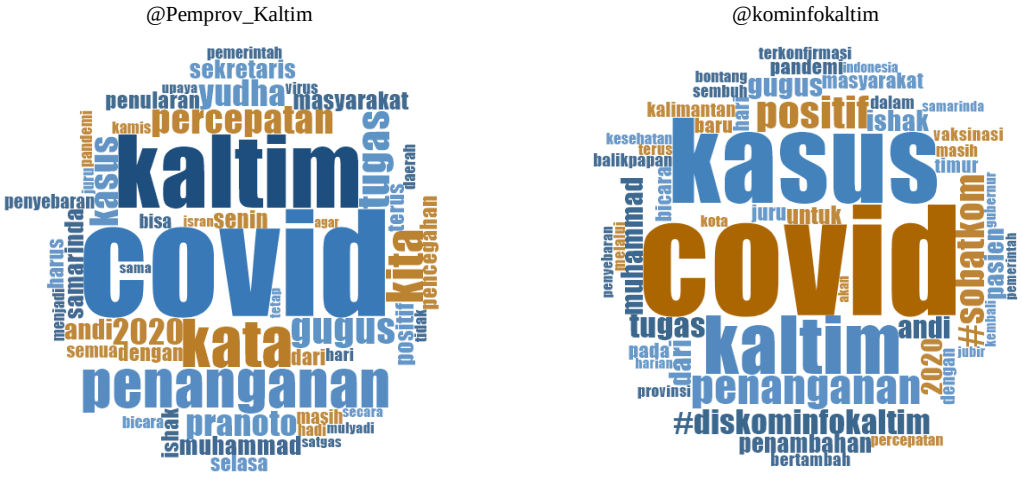


Fig. 5. Example of a figure caption. *(figure caption)*

The data on the tweet with the theme of Covid-19 above shows that controlling Covid-19 is the primary concern conveyed by the East Kalimantan Provincial Government through two social media. In addition to handling policies, the two accounts have also provided various other information to support it—Disaster mitigation. To optimize things, it is necessary to understand the information obtained, especially in this case, information related to health [15]. All information submitted can provide an understanding to the public about the condition of Covid-19 and prevent misinformation regarding the Covid-19 prevention measures [36].

The form of interaction conveyed affects the interactions that occur on social media [37]. So that information collected through Twitter social media can be analyzed to determine the characteristics of the information in it [43], [44]. Purnomo et al. (2021) classify Twitter's social media functions into several categories: Information Provider, Situation Reporting, Risk Communication, Providing mental support, and service information. Although Purnomo et al., (2021) categorize it in the context of public transportation, this is still very relevant if these five categories are the basis for assessing the availability of data generated by the @Pemprov_Kaltim account and the @kominfokaltim account. Some examples of categories of tweets generated by each account related to the Covid-19 control policy can be seen in table 2 below.

Table 2. Examples of Tweet Categories Related to Covid-19 Control Policies in East Kalimantan

Category	Tweet Covid-19 Theme	
	Name Account	
	Diskominfo East Kalimantan (@kominfokaltim)	East Kalimantan Provincial Government (@Pemprov_Kaltim)
Giving Information	"Instruction of the Governor of East Kalimantan No. 27 of 2021 concerning the Enforcement of Restrictions on Community Activities at Level 3, Level	"Exactly at 08.00 WITA, Thursday, January 28, 2021, the second injection of the Covid-19 vaccination in East Kalimantan Province begins"

	2 & Level 1 and Optimizing the Covid-19 Handling Command Post at the Village and Sub-District Levels to Control the Spread of Corona Virus Disease 2019 in East Kalimantan Province." https://t.co/HZlqJDsQif	
Reporting Situation	"The trend of daily Covid-19 cases in East Kalimantan has experienced a significant increase. It is evident from the results reported by the Spokesperson for the East Kalimantan Covid-19 Handling Task Force, Andi Muhammad Ishak as of Tuesday, July 14, 2020, the number of confirmed positive patients increased by 27 cases." https://t.co/fd87EqQuDJ	"If we look at this figure, it is still very high. It means that the potential for its spread is still very strong," said the Secretary of the East Kalimantan Covid-19 Task Force, Yudha Pranoto, Sunday (21/2/2021).
Risk Communication	"This policy was taken as a step to prevent and handle the spread of Covid-19 and to anticipate the emergence of new clusters." https://t.co/bDtDSbgB30	"Let's cultivate a clean and healthy life, in addition to being consistent with the 5M health protocol," said the Secretary of the East Kalimantan Covid-19 Task Force, Yudha Pranoto, Monday (22/2/2021).
Providing Mental Support	"Maybe this Covid-19 will bring a big lesson. Do not just see the negative things, but there must be a lesson later. This is a situation that we really have to face," said Isran in response to the ongoing COVID-19. https://t.co/JLBmDu8qLs	"So, the public must remain vigilant and do not be negligent with current conditions so as not to get infected," said Spokesman for the East Kalimantan Covid-19 Handling Acceleration Task Force H Andi Muhammad Ishak in Samarinda, Wednesday (14/10/2020).
Service Information	Hello #SobatKom, do you know who can get the Covid-19 vaccine?	"Please follow these rules. I am sure that passengers through APT Pranoto Airport can prevent the transmission of Covid-19," said AFF Sembiring, Monday (26/10/2020)

[b.] Source: processed by researchers

The character of the use of social media can be categorized based on the conditions that occur, and it can show that social media works as its essential function. According to Loilatu et al., (2021) the role of social media has obvious characteristics, especially in identifying problems and environmental conditions, so that other social media users also remember the information conveyed. The same thing was also told by Kavanaugh et al. (2012) that social media has a clear vision so that its use can be known based on information. From the function of the two social media accounts, both @Pemrov_Kaltim and @kominfokaltim, according to Panagiotopoulos et al., (2016) as a management tool in a crisis condition, this function is emphasized by social media functions that can provide real-time information in a fast time.

As in the view of Machmud et al. (2021) crisis conditions force all available resources to work optimally, including social media Twitter, so that it becomes a medical tool and medical information at any time [14]. In addition, certain functions filter information from several sources of inappropriate information [8]. The analysis results also explain that the two social media accounts are the primary information media for the public even though they have a low intensity of information on each other. In Szmuda's view, this function explains that social media is the primary source of information [42].

5. Conclusion

Based on the results of an analysis of the use of Twitter social media in handling Covid-19 in East Kalimantan. So, this study concludes that the East Kalimantan Government's social media account functions as crisis mitigation and management tool. This function explains that in a crisis condition, social media works optimally to provide information quickly and prevent the spread of hoax information. From the data described, it is explained that the Twitter social media account with high intensity is the @kominfokaltim account with a difference in the number of tweets which is not

much different from the @Pemprov_Kaltim account, as well as the monthly intensity of Twitter, and the @kominfokaltim social media account is more intense every month in generating tweets and provide information. In terms of information content, based on an analysis using Nvivo 12 Plus, it shows that the information conveyed during the Covid-19 outbreak is directly related to policies for handling and growing COVID-19 cases in East Kalimantan.

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