A CORPUS-BASED ANALYSIS OF CRITICISM STRATEGIES IN COVID-19 CORPORA

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ARTICLE INFO	ABSTRACT
	The aim of this study is expected to find whether the word critical frequently modifies COVID-19 or HIV, and the type of critical strategies that frequently appear on the corpora. COVID-19 becomes the outbreak issue which is considered as a big problem from everyone in the world. It spreads rapidly from human to human. COVID-19 does not repute as something trifled, because it zaps undetected person in person. Besides, the existence of HIV still becomes the specter of today's issues. To reach further expanding, corpus linguistic is applied to examine the data of this study. The final findings will be analyzed by pragmatic perspective: criticism strategies. The result showed the T-score of COVID-19 > P value (4.548827 > 1.658). Hence, the proof meant word critical was most significantly
	modified COVID-19 rather than HIV. Besides, other result represent indirect criticism as the most frequent presence of critical strategies, by the keywords 'coronavirus may' displayed 137 (0.49 per million) tokens, ' coronavirus is quite' displayed 3 (0.01 per million) tokens, and 'coronavirus probably' displayed 8 (0.03 per million) tokens. Based on the keywords, the types of critical strategies that frequently appear on corpora are correction, advice about change, indicationg the standards, and expression of uncertainty.

1.INTRODUCTION

COVID-19 becomes the outbreak issue, which is considered as the tragic issue from everyone in the world. This virus spreads rapidly from human to human. Therefore, the one who is suspected will experience some symptoms. Some of them diagnosed as mild patients might meet pneumonia and other respiratory failures(Schulte-Schrepping et al., 2020). This issue asks for the presence of experts because of its emergency. Then, the process of the current battle to this virus still under construction to find an accurate way to diminish it (Nova-Reyes et al., 2020). Some experts have done their research to find the problem-solving towards COVID-19. Schulte-Schrepping et al. (2020) share knowledge about COVID-19 based on a health perspective. At the time, the spreading of this current issue also invites other non-medical experts to investigate the case from another perspective. Then, Herat (2020) analyzes the personal and collective response based on British personal stories newspaper reports about COVID-19 and examines the impact of this pandemic on social and economic impact from different societies. Besides, other experts put their attention to look COVID-19 from a religious perspective. Mukharom & Aravik (2020) Mukharom & Aravik (2020) discuss their study about how the government finds the soluted way based on Prophet Muhammad in dealing with massive disease cases regards to COVID-19. To that end, this pandemic also takes attention entirely from various aspects.

A significant number of suspected people carry a curiosity among the experts. They are eager to find the soluted way to break the problem or update the latest findings by writing academic papers, articles, or books. The contents consist of different results based on the perspective that the experts want to convey. On certain occasions, they implicitly carry some criticism strategies to respond to the previous findings. House & Kasper, as cited in Nguyen (2005), divide the criticism into two stages. They are direct criticism and indirect criticism. Then, they are dug up into a taxonomy that split them into external and internal devices. On other occasions, Nguyen widens the findings into some criticizing; they are request for change, hints, and opting out (Nguyen, 2013). Direct criticism is divided into two stages; they are managing criticism by mentioning an explicit statement of the problem and warning about the consequences of H's choice and action. Then, request for change for criticism is poured into giving advice or suggestion to reach a change and improvement and showing a standard expectation over the reality. Lastly, hints are used to purpose someone's opinion based on the offered choice and or draw a teasing or sarcasm towards somebody.

Then, based on the writer's significant issue, this current study desires to investigate the criticism strategies that implicitly attach by the experts when writing the academic article and paper about COVID-19. The mentioned issue is relatively new since the experts are more interested in analyzing the medical perspective problem than a linguistic perspective, incredibly pragmatic perspective. Iqbal et al. (2020) investigate Pakistani Premier Imran Khan's (PKI) towards the national awareness of causes, effect, and precautions based on COVID-19's issue. This problem is carried to respond to the unsureness of the vaccine's development made by the experts. Besides, they also question their worry about living aside with COVID-19 as peace as HIV or dengue. Then, Herat (2020) analyzes the effect of self-isolation due to COVID-19 based on mental health issues by searching the term coronavirus, COVID19, isolation, and mental health on Google from Sri Lanka and Britain. Later, this study is expected to find the experts' criticism strategies of an academic article related to COVID-19 by searching the keywords coronavirus may, coronavirus is quite, and coronavirus probably. May is quite and probably the keywords of criticism strategies mentioned frequently on criticism strategies by House & Kasper on Nguyen (2005). Moreover, the writer hopes the updated findings in the future may lead other writers to conduct additional research to expand this study.

2. LITERATURE REVIEW
2.1 Criticism Strategies

House & Kasper (1981) on Nguyen(2005) is divided the criticism into two stages. They are direct criticism and indirect criticism. Then, they are dug up into a taxonomy that split them into external and internal devices. In other occasions, Nguyen widens the findings into some strategies of criticizing; they are request for change, hints, and opting out (Nguyen, 2013). Based on Nguyen's explanation (2013), direct criticism is divided into two stages; they are managing criticism by mentioning an explicit statement of the problem, and giving a warning about the

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consequences of H's choice and action. Then, request for change for criticism is poured into giving advice or suggestion to reach a change and improvement and showing a standard expectation over the reality. Last, hints are used to purpose someone's opinion based on the offered choice and or drawing a teasing or sarcasm towards somebody. The preview study is conducted by Nguyen (2013), in which the issue is about the exploration of how ESL students express their criticism compared to the native speaker. The result of the study is the students frequently construct direct criticism and request for a change to utter theirs. Moreover, Chen and Rau (2015) explore their issue of relating to criticism given by judges on a singing competition. They try to expand the issue by examining how the televised singing competition judges convey their compliment and criticism to contestants.

2.2 Corpus Linguistic

Corpus linguistics is definite as conducted the general linguistic analysis in the form of collection text by examining the data on the computer revolution (Le and Miller: 2020). The Medical Web Corpus is used to examine a large size of heterogeneous medical text which can access through Sketch Engine (Le & Miller, 2020). The corpus will not always talk about science, but it depends on the discipline chosen as the approach (Louw & Milojkovic, 2016). Brezina (2018) introduces corpus-linguistics as the methodology of language analysis that serves a shred of empirical evidence in big data to simplify language findings. Moreover, this method is not only about quantitative form because of its amount of data, but also the pattern of the findings can be interpreted by another perspective to simplify the process (Baker & Egbert, 2016).

3. METHODOLOGY

The aim of this study is expected to find whether the word critical frequently modifies COVID-19 or HIV, and finds the type of critical strategies that often appear on the corpora. Corpus linguistics is used as the methodology of this study. Corpus linguistics is defined as conducting the general linguistic analysis in the form of collection text by examining the computer revolution (Le & Miller, 2020). Another researcher tries to seek the result by applying corpus linguistic. Crible & Degand (2019) finish the experiment about the sense disambiguation task in spoken French and English and compare them with naïve and expert coders. Then, they examine the data by using corpus linguistic. On the other hand, Herat (2020) analyzes the effect of self-isolation due to COVID-19 based on mental health issues by searching the term coronavirus, COVID19, isolation, and mental health on Google from Sri Lanka and Britain. Then, the data is analyzed by corpus linguistics using AntConc. Further, this study's final result will be connected with a pragmatic perspective about the common critical strategies that mostly appear towards the medical text.

This study represents a set of data based on the collective works from corpus linguistic. The selective tool which is attached for this study is Sketch Engine. It is familiar with medical text based on the medical works represented on the screen. Sketch Engine can be visited at https://www.sketchengine.eu/ to count the most frequent word critical that will appear on COVID-19 or HIV. They are selected as the reference data for this study. At the end of the analysis, the result will be analyzed by focusing on pragmatic discipline about the criticism

strategies presented by House & Kasper and Nguyen (2013)'s strategies. To simplify the analysis, this study will be conducted by focusing on the use of modal as one of the mitigating devices of criticism strategies of House & Kasper.

The technique and instruments of this study are a notation amount of data of corpora on Sketch Engine. This study is delivered the result in the form of the frequency of notated words by counting the score of observed frequency and expected frequency before comparing the data. At the end of the analysis, the data will be enlarged with pragmatic theory analysis. Based on the explanation, the stages of the method are stated below:

1. Determining the references word based on COVID-19 and HIV
2. Simplifying the keyword into critical
3. Counting the T-score of COVID-19 and HIV, then comparing the result with P value (α)
4. Input the related keywords based on the mitigating device of criticism strategies
5. Associating the result with the pragmatic theory which has been already displayed on this study

4. RESULTS AND DISCUSSION
4.1 Critical Modifies Covid-19

In this study, 'critical' was chosen to be the annotation word by utilizing the collocate into -3 and +3. The Observed frequency of COVID-19 was 21307, while HIV was 58148. After that, the 'critical' word was found based on COVID-19 and HIV as the reference of the current corpora. Based on the findings, there were 67 co-occurrences for COVID-19, besides it showed 44 co-occurrences for HIV. This discovery would show 111 both co-occurrences total of COVID-19 and HIV. After that, considering the total number of non-critical words trough COVID-19 and HIV were needed as the comparison. Then, the result of it was shown that 21240 were navigated for COVID-19 based on non-critical words. Besides, 58104 were represented non-critical words based on HIV, in which the augmented of them are 79344.

Table1. Observed Frequency

	COVID-19	HIV	Total
Critical	67	44	111
Non-critical	21240	58104	79344
Total	21307	58158	79455

Next, in order to process the establishing of observed frequency, this study should count the expected frequency (Brezina, 2018). The formula and the result were performed below:

$$\text{Expected frequency of collocation} = \frac{\text{Node frequency} \times \text{collocate frequency}}{\text{no. of token in text of corpus}}$$

Table2. Expected Frequency

Expected Frequency		Dependent Variable		Total
		Value 1	Value2	
Independent Variable	Value 1	29.7	81	R1
	Value 2	21277	58066.7	R2
Total				

After acknowledging the expected and observed frequency, the next step was seeking which references; either COVID-19 or HIV was mostly modified by word critical. This step was called seeking the T-score, whose function was the connected measures for establishing the collocation relationship between words (Brezina: 2018, p. 276). Based on Brezina (2018: p. 72), the equation of T-score was performed below:

$$t = \frac{O11 - E11}{\sqrt{O11}}$$

The result of calculating the formula, it showed that the T-score of COVID-19 was 4.548827, besides the HIV was -5.6132. This evidence floored 4.548827 > -5.6132. The further process was comparing the result above with P-value/α to make sure whether our hypothesis had enough evidence to reject the null hypothesis. Then, the result showed 4.548827 > 1.658. Hence, the proof meant word critical was most significantly modified COVID-19 rather than HIV.

4.2 The Most Frequent Presence of Criticism strategies

Based on the discovery of House & Kasper on Nguyen (2005), the strategies of critical could be analyzed by considering taxonomy of mitigating to investigate the criticism. They were grouped into 2 parts, as such external and internal devices. But, this study was applied the internal device; to simplify the inquiry, this study addresses the modal auxiliary as the keyword of the corpora based on the House & Kasper on Nguyen (2005): **may, is quite, and probably**. It has already found that the keyword showed its own tokens: **'may'** displayed 137 (0.49 per million) tokens, **'is quite'** displayed 3 (0.01 per million) tokens, and **'probably'** displayed 8 (0.03 per million) tokens.

May was considered as the most frequent appear on corpora. There were 137 tokens which its existence was juxtaposed with coronavirus. Some evidences referred into a certain numbers of specific types of criticism strategies, indirect criticism. They were correction, advice about change, indicating standard, expression of uncertainty, and suggestion for change.
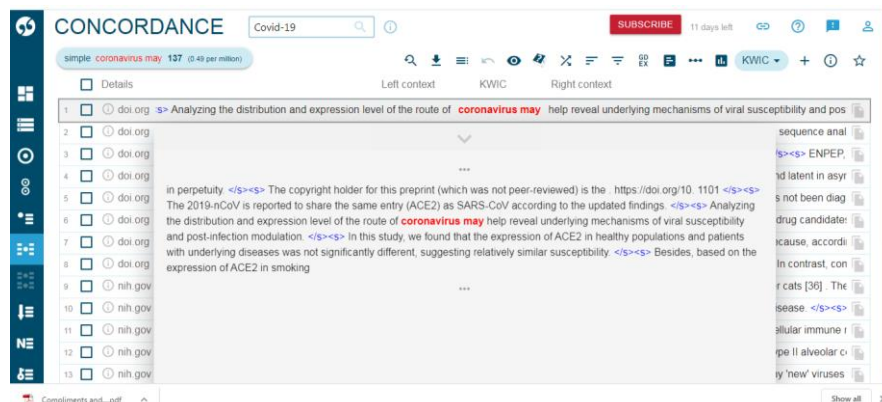
Figure1. Correction (Critical Strategis)

It has been found that **'may'** could bring an evidence of the existence of criticism strategies on COVID-19 corpora. Based on the phrase before and after the keywords (Analyzing the distribution and expression level of the route of **coronavirus may** help reveal underlying mechanism of viral susceptibility and post-infection modulation), the statement referred to show a correction for the previous sentence. The correction had a purpose to fix an error by asserting a specific alternative. Hence, the proof was used to mention an alternative way to find a concern based on the previous report about COVID-19.
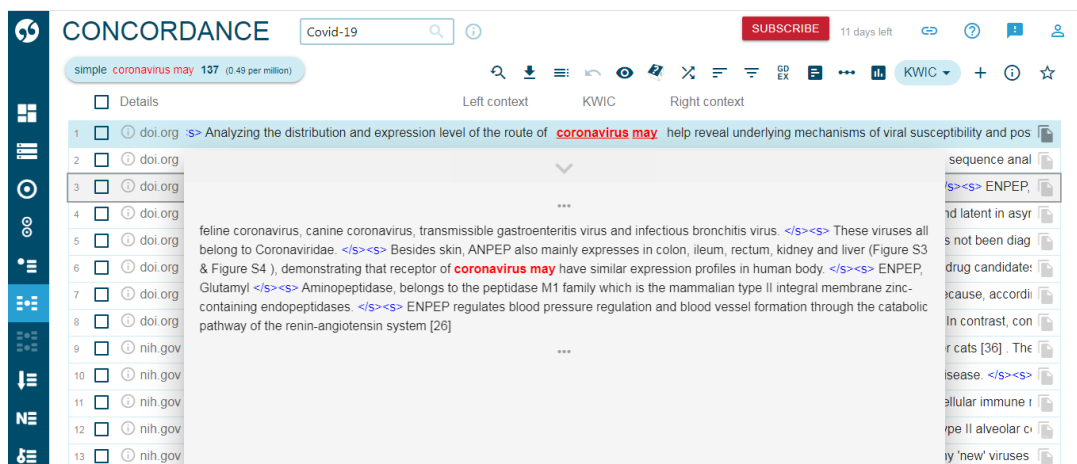
Figure2. Advice about Change (Criticism strategies)

Other than that, this keyword brought other criticism strategies, which the purpose was giving an advice for a certain act. So, based on before and after the keywords (Besides skin, ANPEP also mainly express in colon, ileum, rectum, kidney, and liver, demonstrating that receptor of **coronavirus may** have similar expression profiles in human body), it indicated that

the passage had its own indirect message to make an advice about movement towards a present case that has already occurred.
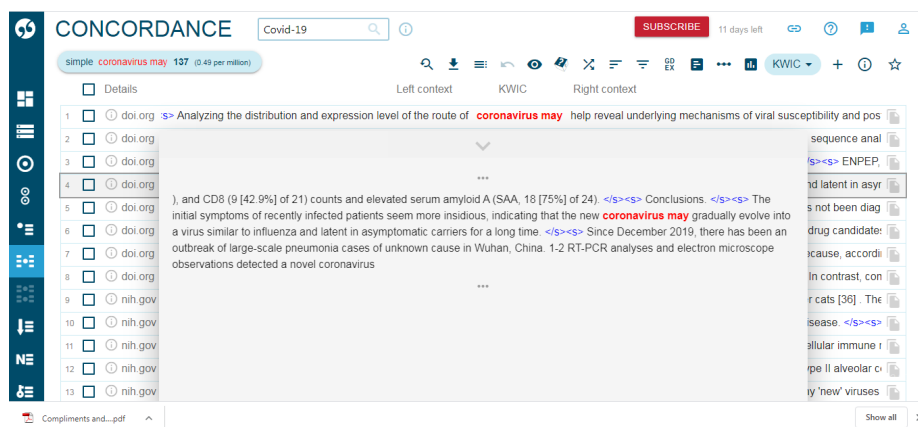

Figure3. Indicating the Standard (Criticism strategies)

This part explored other type of criticism strategies, which the position was standing as indicating the standard. Related to the right and left side of the keywords (The initial symptoms of recently infected patients seem more insidious, indicating that the new **coronavirus may** gradually evolve into a virus similar to influenza and latent in symptomatic carriers for a long time) indicated that there were a set limitation to restrict the further incident upon the current issues. In other word, this concern might bring the establishing the core of the virus.
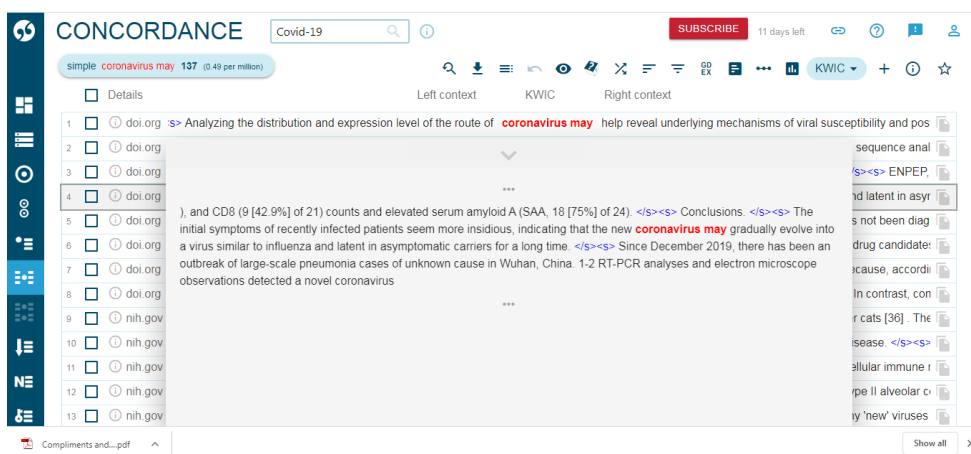

Figure4. Expression of Uncertainty (Criticism strategies)

This evidence mentioned the expression of uncertainty, which the purpose was showing the awareness of inappropriateness statement. It was also showing a belief towards a perception. This happened on the picture4, in which the right and the left side of the keywords (The average incubation period of New Coronavirus infection was 7 days, so this article believes that the first

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patient infected with New **Coronavirus may** already exist on December 1, 2019) shared a belief towards an issue based on the given fact which has already seen before. Besides, the next sentence
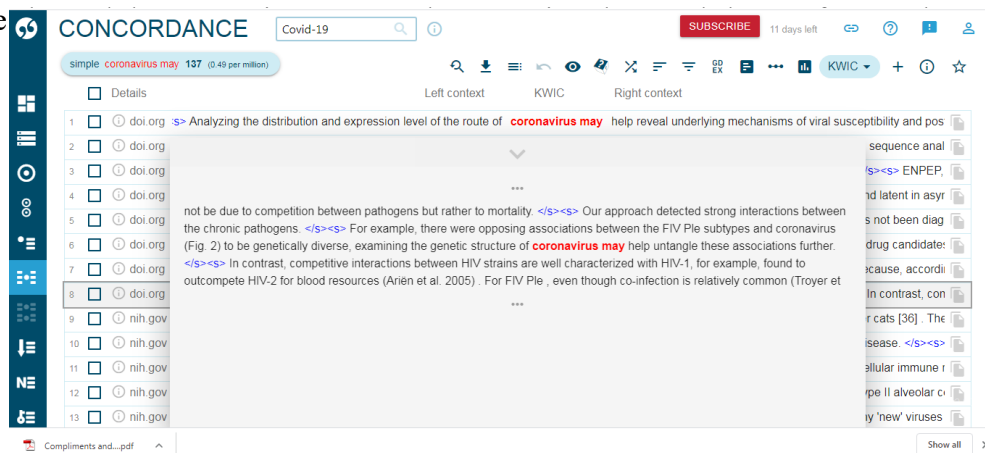

Figure5. Suggestion for Change (Criticism strategies)

The recent token revealed an implicit suggestion by showing the example of evidence related to the current issue. This belief provoke as the compliment of claim as stated on the previous statement before the related sentence which contained the keywords (Our approach detected strong interaction between the chronic pathogens). Because of the claim, the token laid an example to simplify their argument indirectly.
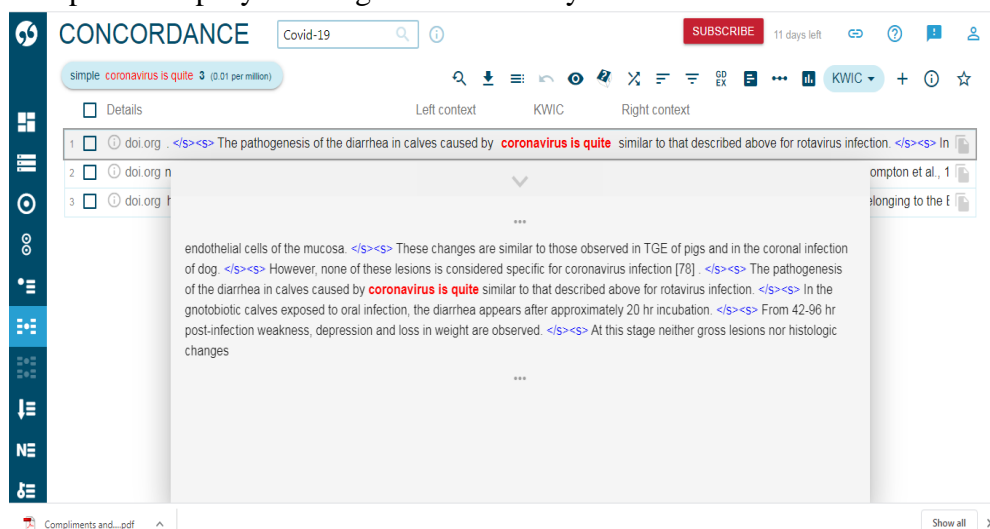

Figure6. Expression of Uncertainty (Criticism strategies)

This part was the least number of token from others, because the keywords only provided 3 token (0.01 per million) as the result of **'coronavirus is quite'**. Based on the findings, this

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modal was one of the devices which were commonly used to perform criticism strategies. Further, this side performed an expression of uncertainty, which the purpose was showing the uncertain expression towards the expectation. Based on the picture above, there might be an unpredicted accident happened directly and provoke undetected statement before the keywords (However, none of the lesions is considered specific for coronavirus infection). So, the statement performed unspecific statement over the moment. Hence, the phrase which the position was before and after the keywords confirm it as one of the indirect criticism strategies (The pathogeneses of diarrhea in calves caused by **coronavirus is quite** similar to that described above for rotavirus infection).
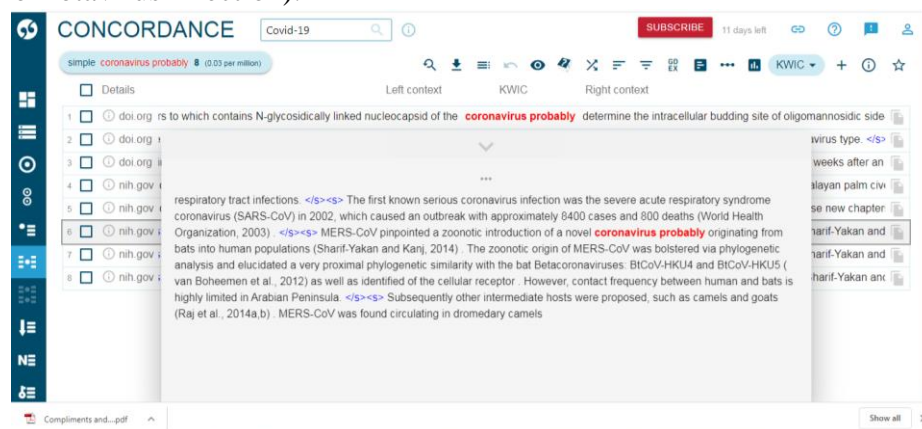

Figure7. Expression of Uncertainty (Criticism strategies)

Most of the performed data showed that they had an indirect message along with modal auxiliaries as the trial to point out an idea. There was unpredicted and unclear information which actually took a role in the keywords. So, this proof **'coronavirus probably'** helped to show about one of the common existence of criticism strategies (MERS-CoV pinpointed a zoonotic introduction of a novel **coronavirus probably** originating from bats into human populations). Uncertainty expression was clearly represented to perform a probably virus which was floated from an animal. Even the passage laid a compliment data after the keywords. It might be weakened the statement on the previous sentence.

There were a lot of mitigating devices to help detecting the criticism strategies by House & Kasper (1981) on Nguyen (2005), as such the external (steers, sweeteners, disarmers, grounders), and internal devices (syntactic and lexical). In order to simplify the findings, this study laid the form of modal auxiliaries as one of the member of internal advice. Build upon the findings, the data floored amount of tokens which each of them performed 137 tokens from the collaboration keywords **'coronavirus may'**, 3 tokens for **'coronavirus is quite',** and 8 tokens for **'coronavirus probably'**.

The floored data gave an insight that the frequent appearance of criticism strategies referred to indirect criticism, in which the purpose was implicitly indicating the standard and rules, correcting something wrong, suggesting and demanding a change, and others (House & Kasper (1981) on Nguyen, 2005). As the purpose of academic article which was commonly

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made to perform tested act, the writers should perform a direct criticism to help the further academic article. Besides, this study did not recommend any indirect strategies which the form covered a doubt when giving a comment or the continuant statement.

5. CONCLUSION

As the evidence, the tested data perform that T-score of COVID-19 > P value (4.548827 > 1.658). It means that the term critical dominantly modify COVID-19 corpora rather than HIV. Then, searching the keywords **may, is quite, and probably**, the result delivers that the common existence of criticism strategies on COVID-19's corpora are correction, advice about change, indicating the standards, and expression of uncertainty. They include indirect criticism strategies.

ABOUT THE AUTHOR(S)
The author is a Linguistic Magister student at Universitas Airlangga. Her current interest is related to corpus linguistic and pragmatic discipline.

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