Sentiment Analysis: *Sekolah Tatap Muka* in the New Normal Era

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ABSTRACT

Through the Circular of the Minister of Education, Culture, Research, and Technology (Mendikbudristek) Number 3 of 2022, face-to-face learning is limited to educational units following the provisions stipulated in the Joint Decree of the Four Ministers. In addition, it is explained that parents/guardians of students are given the choice to permit their children to take part in Limited face-to-face learning or distance learning. This study aimed to determine public sentiment regarding *Sekolah Tatap Muka*. To achieve the research objectives, sentiment analysis is used using the Drone Emprit application. Data collection was obtained from the Twitter social media application, the data obtained were posts from February 1, 2022, to March 31, 2022. The results showed that there were 898 tweets or 29.23 percent of positive sentiments about *sekolah tatap muka*, and there were 1,954 tweets or 63.61 percent of negative sentiments about *sekolah tatap muka*, and there were 220 tweets or 7.16 percent of neutral sentiments about *sekolah tatap muka*.

Keywords: *sekolah tatap muka*; e-learning; Twitter, tweets; Drone Emprit

INTRODUCTION

The Covid-19 pandemic has influenced the learning process at all levels of education. In follow-up, governments and all levels of education around the world are making significant attempts to assure students can receive the best levels of education and learning performance. Therefore, an effective e-learning evaluation is very important to assure that students get the right learning process, mostly during the current Covid-19 situation.

The COVID-19 pandemic has caused the greatest disruption in the education sector from lower classes to higher education levels which has had a major impact on learners, teachers, and parents across the globe. (Bhargava et al., 2021; Orlov et al., 2021; Roman & Plopeanu, 2021). The system in school education has changed drastically, with a significant increase in the use of various technological media for distance teaching and learning, referred to as "online learning and teaching".(Suprianto et al., 2020). The immediate transition to e-learning and teaching has created challenges for students and schoolteachers alike. Many teens and young adults experience high levels of stress and anxiety arising from online learning.

E-learning could cause extraordinary difficulties for both students and teachers. Students often are estranged and alienated because they doubted contributing to online communities. This may stem from several factors, such as personality, sense of transactional distance in the online

environment, lack of trust and confidence in participants in the online community, lack of nonverbal communication (face string, tones of voice, etc.), connection difficulties (e.g., low internet speed), poor writing skills or language barrier (Chiu, 2022; Szopiński & Bachnik, 2022). For teachers, preparing online courses is much more time-consuming than preparing for face-to-face learning in class (Guri-Rosenblit, 2018).

Due to the COVID-19 pandemic crisis, online teaching and learning have become a mandatory component of educational institutions including schools, colleges, higher education institutions, and universities globally. The outbreak of this deadly virus forced the closure of educational institutions globally to control the spread of the virus. This situation is forcing teaching professionals to find alternative teaching methods during the lockdown period so that traditional teaching is turning into web-based teaching and learning where teaching academics and students are virtually connected.
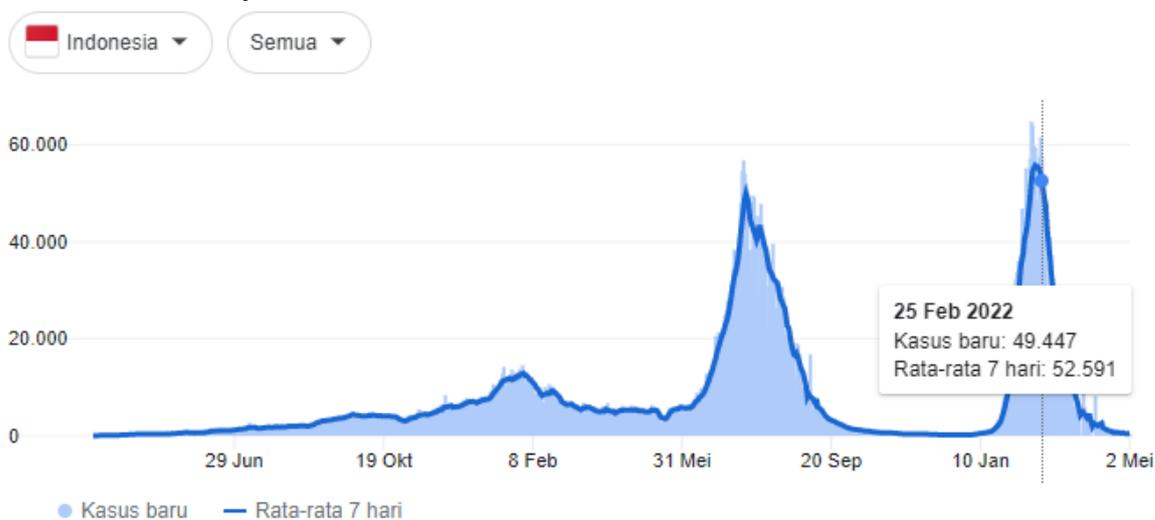
Figure 1. Graph of New Cases of Covid-19 Spread for the Period June 2021-May 2022
Source: Google

Since August 1, 2021, new cases of the spread of COVID-19 have decreased significantly. On September 13, 2021, the Ministry of Education, Culture, Research and Technology through the Directorate General of Higher Education, Research and Technology issued Circular Letter Number 4 of 2021 concerning Implementation of Face-to-Face Learning for the Academic Year 2021/2022 which contains face-to-face learning, whether lectures, practicum, studio, field practice, or other forms of learning, universities must meet the provisions set by the Ministry of Education, Culture, Research, and Technology. Furthermore, for the high school level, follow the regulations that apply in their respective provinces. Elementary and junior high schools follow the regulations of their respective districts/cities.

Along with its development, the number of new cases increased in January-February 2022, so some regions had to temporarily stop face-to-face learning. Through the Circular of the Minister of Education, Culture, Research, and Technology (Mendikbudristek) Number 3 of 2022,

face-to-face learning is limited to educational units following the regulations stipulated in the Joint Decree of the Four Ministers. In addition, it was explained that parents/guardians of students were given the option to allow their children to take part in Limited face-to-face learning or Distance Learning.

Then it was also explained again the role of local governments to supervise and provide guidance on the implementation of Limited, especially in terms of socializing the safe implementation of Limited to parents/guardians of students. Then also ensure strict application of health protocols by education units and conduct behavioral surveys of compliance with health protocols and epidemiological surveillance in education units.

Not only that, but the local government also plays a role in accelerating the Covid-19 vaccination for educators, education staff, and students. Then also ensure the handling of the findings of confirmed cases of Covid-19 in the education unit, as well as ensure the temporary suspension of face-to-face learning Limited based on the results of epidemiological surveillance by the regulations in the Four Ministerial Decree.

The results of the research of Darwis et al.(2021)found that students prefer online learning to offline learning because they can complete several tasks during learning, can be closer to parents, and learning materials can be accessed repeatedly. Different research results were obtained by Sahir et al.(2021)that 74 percent of online learning get negative sentiments. Based on the differences in research results, it is interesting to examine more deeply Sentiment Analysis: *Sekolah Tatap Muka* in the New Normal Era.

METHOD

This study uses a netnography study. Netnography: a social science research method to present a new approach to conducting ethical and thorough ethnographic research combining archival work and online communication, participation, and observation, with new forms of digital and networked data collection, analysis, and representation of research (Kozinets, 2006). This research approach is Social Network Analysis (SNA) with sentiment analysis type. This analysis is used because the data obtained comes from the Drone Emprit application, Drone Emprit is a system to analyze and monitor social media based on big data technology using Artificial Intelligence (AI) and Natural Learning Process (NLP) expertise.

In the sentiment analysis type SNA, there are several items that play an important role in data analysis such as social media users, user interaction correlation, tweet period, group, sub-group, and tweet sentiment (positive, negative, or neutral). Social media users are people who are involved in tweeting, commenting, liking, or retweeting related projects that have been determined. According to Arhas, et al. (2022), "correlation is the relationship of uploads from users and related to other users, correlation refers to nodes of a certain type measured by users of a certain set of users". A group is a collection of all users whose relationship is measured in terms of searches performed and forms its own number of nodes. Whereas sub-groups are related users because tweets are related to each other in general searches. To be able to form sub-groups Users must be able to interact regarding searches. Tweets are statements or arguments expressed by users through social media.

The data collection was obtained from the Twitter social media application, the data obtained were posts from February 1, 2022, to March 31, 2022. Mention types used were mentions

and retweets. The number of nodes is 2000. The data were analyzed using the Drone Emprit application. The project in this research is "*Sekolah Tatap Muka*".

RESEARCH RESULTS AND DISCUSSION

Based on the results of the Social Network Analysis, it is known that there are 1925 users who upload *"Sekolah tatap muka"* tweets. There are 133 users who form a correlation with each other. Furthermore, it was found that there were 3072 tweets on the Twitter application related to "*Sekolah Tatap Muka*". There were 29.23 percent or 898 positive sentiment tweets about *Sekolah Tatap Muka*. 63.61 percent or 1,954 tweets of negative sentiment about *Sekolah Tatap Muka*. And 7.16 percent or 220 tweets of neutral sentiment about *Sekolah Tatap Muka*. For more details presented in Figure 2:
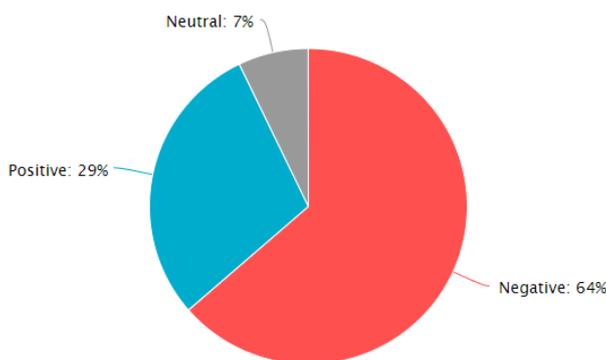
Figure 2: Sentiment Analysis for "*Sekolah Tatap Muka*" (2022-02-01 to 2022-03-31)
Source: Drone Esprit

Based on further analysis, the peak of positive tweets occurred on February 15 and decreased in the period from February 28, 2022, to March 14, 2022. The peak of negative tweets occurred several times, namely on February 10, 2022, February 21, 2022, February 25, 2022, March 17, 2022, 21 March 2022, and 31 March 2022. From the results of the SNA, samples were taken of 10 percent of positive, negative, and neutral tweets related to "*Sekolah Tatap* Muka", respectively.

Table 1. Sample of Twitter User's Tweet Data Recap about "*Sekolah Tatap Muka*"

No	User	Sentiment	Date	Nudge
1	@lamented	Positive	30 March 2022	Nggak mau online nder enak offline kenangan nya dapet mana bentar lagi lulus sekolah terus juga kalau oddline tidur makan jadi terarur terus keluar keringet juga nggak suntuk dirumah terus dapat uang saku yeyy
2	@DivHumas_Po lri	Positive	21 March 2022	Sobat Polri, sekarang sekolah sudah mulai masuk dan bisa belajar tatap muka kembali, dengan syarat sudah vaksin dosis lengkap Akan tetapi jangan lupa ikuti protokol kesehatan yang ada ya,s eperti memakai masker, menjaga kebersihan dan juga langsung pulang ketika selesai sekolah
3	@ajiwar	Positive	14 February 2022	Gw benci ini tapi sepertinya perkembangan pandemi ke depannya akan seperti ini: -selama udah 2x vaksin, orang akan bebas traveling kecuali positif. -Pemerintah tidak akan melakukan Lockdown kecuali kasus luar biasa seperti Delta. -Sekolah tatap muka akan terus dijalankan
4	@Ghazaliilhwan	Negative	March 25, 2022	Kalian kejam, Anak mau sekolah knp suruh pulang alasan blm vaksin. Sudah jelas skr bukan jadi syarat untuk sekolah tatap muka
5	IDCOBot	Negative	15 February 2022	RT Emak2 pada galau nih karena anak2 mulai #sekolah Offline lagi? Khawatir nyamuk dimana2. Apalagi #Nyamuk #DBD dan #Malaria
6	@ReportCovid	Negative	22 February 2022	Lebih dari 1500 warga sekolah terinfeksi #Covid19. Pembelajaran tatap muka mempertaruhkan keselamatan anak
7	@zleehaechan	Negative	20 March 2022	Ujian sekolah offline, bingung mau di isi apatuh lembar jawab
8	@Candra253823 55	Negative	17 February 2022	@jokowi Anak2 sekolah dasar seluruh Indonesia baik nya dihentikan dahulu sekolah tatap muka, jangan menunggu pak. Anak2 sekolah dasar belum paham prokes
9	@bobalatos	Negative	20 February 2022	@wrtamall @sxtyyx @tanyakanrl wow... sesuka sukanya org sekolah offline, tapi kalau disekitarnya ad yg kena, ya mending online lah. Masih mau hidup kan?
10	@CAMABAKE SMAS22	Neutral	11 March 2022	@ryuujin111 wish me luck kitaaaa aku ujian sekolah offline

Source: Drone Emprit

These results indicate that after undergoing online learning for less than 2 years, students feel comfortable with online learning, and when they are switched to face-to-face learning, students must begin to adapt to the face-to-face learning system. In addition, many negative tweets

came from parents who were worried that their children had contracted COVID-19. Positive tweets came from students who yearn to boost offline schools, and state institutions that encourage students to carry out online learning. Meanwhile, neutral tweets came from students who were taking exams. In general, tweets about "*Sekolah Tatap Muka*" are presented in the form of a network, as shown in Figure 3:
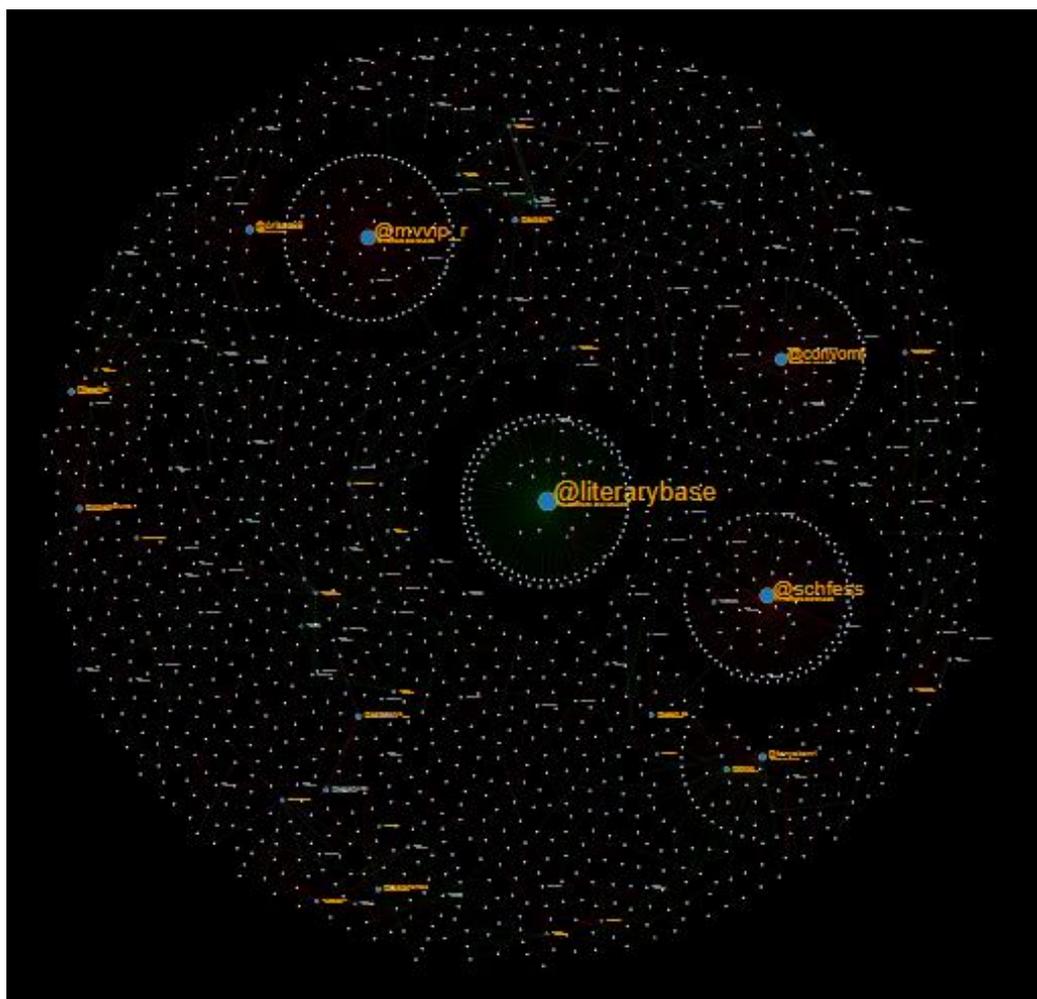
Figure 3. Network Analysis
Source: Drone Emprit

Discussion

Based on the results of the study, it was found that some parents were still worried about face-to-face learning in the new normal era. This happened because of concerns about the transmission of Covid-19 among students. Parents believe that the implementation of health

protocols for students, especially in elementary schools, cannot be carried out optimally by students. Confidence from parents helps shape behavior in parents of students themselves. Even though it persists, belief is not a fixed individual characteristic but is acquired through socialization. This is by the theory of the Health Belief Model (HBM).

Health Belief Model(HBM) was originally expanded in the 1950s by social psychologists at the U.S. Public Health Service to explain the failure to participate in programs to prevent and detect disease. (IM Rosenstock, 1990). Later, this model was expanded to study people's responses to disease symptoms. Health Belief Model is a conceptual formulation to determine individual perceptions of whether they accept or not their health. The behavior of parents of students refusing face-to-face learning is reasonable, this is to avoid the spread of Covid-19. The variables assessed include the individual's desire to avoid pain, and their belief that there is an effort to avoid the disease. HBM is a concept that expresses an individual's reasons for wanting or not wanting to do a behavior(Janz & Becker, 1984).

According to the health belief model theory, whenever there is an increase in the rating of the individual's level of ratio, it is likely that there will be an increase in adopting the recommended preventive behavior. This is also in accordance with the regulations prepared by the Government that students who are entitled to attend *Sekolah Tatap Muka* are students who obtain parental permission. Furthermore, the belief that the actions taken by parents will be beneficial, namely parental worries will be reduced. Apart from benefits, there is also a threat dimension. Threat perception, or perceived risk assessment, is based on a person's perception of a person's vulnerability to disease and the anticipated severity of the consequences of that disease.

Health Belief Model(HBM) hypothesizes that health-related measures depend on the simultaneous occurrence of three classes of factors:

1. There is enough motivation (or health problem) to make the health issue important or relevant.
2. The belief is that a person is prone to serious health problems or symptoms of a disease or illness. This is often called a perceived threat.
3. The belief is that following certain health recommendations will be beneficial in reducing the perceived threat, and at a subjectively acceptable cost. Cost refers to the perceived barriers that must be overcome to follow health recommendations; it includes, but is not limited to, financial expenses(Strecher & Rosenstock, 1997)

Health Belief Model adopts the theory of Rosenstock et al.(1988)and (Bandura & Schunk(1981)The negative sentiment of *"Sekolah tatap muka"* is presented in Figure 4:
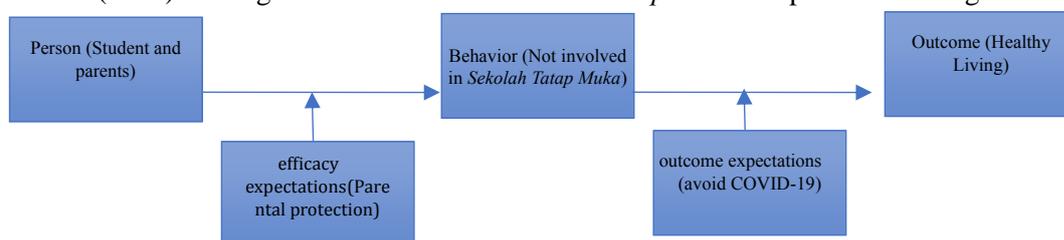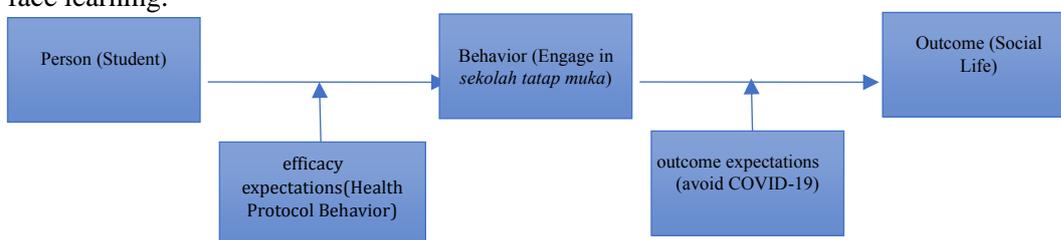

Figure 4. The flow of Negative Sentiment *Sekolah Tatap Muka*

For students and parents (person) not to be involved in face-to-face learning (*sekolah tatap muka*) (behavior) for reasons of healthy living (outcome), they must also believe that not being involved

in face-to-face learning is beneficial for their lives because of parental protection (efficacy expectations) and also that it can avoid COVID-19 (outcome expectation).

The concept of self-efficacy (efficacy expectations) is different from the expectations of outcomes. Outcome expectations (defined as a person's estimate that a certain behavior will lead to a certain outcome). Very likeness to HBM's concept of "perceived benefit." The efficacy expectation is defined as the belief that a person can successfully carry out the behavior required to produce the result. In face-to-face learning, students can live a healthy life face-to-face with a note that they must comply with health protocols. The implementation of health protocols must be routinely evaluated so that parents also feel comfortable if their children participate in face-to-face learning.

Figure 5. The flow of Positive Sentiment *Sekolah Tatap Muka*

For students (persons) to be involved in face-to-face learning (behavior) because they want to socialize with peers (outcomes), they must also believe that being involved in face-to-face learning is beneficial because it will give birth to new habits, namely continuing to follow health protocols (efficacy expectations) and that it can avoid COVID-19 (outcome expectation).

Between positive and negative sentiments *"Sekolah tatap muka"* has the same outcome expectation, namely avoiding COVID-19. This is also continuously supported by the Government by aggressively conducting free vaccinations for all education actors.

Face-to-face or online learning does not have a significant difference if it is done with the right system, supported by qualified resources, technology that can be mastered by students and teachers, and a comfortable and safe atmosphere.

CONCLUSION

Based on the results of data analysis, it was obtained that after undergoing online learning for less than 2 years, students feel comfortable with online learning, and when they are transferred to face-to-face learning, students must begin to adapt to the face-to-face learning system. In addition, many negative tweets came from parents who were worried that their children had contracted COVID-19. Positive tweets came from students who yearn to boost offline schools, and state institutions that encourage students to carry out online lectures.

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