PUBLIC PERCEPTION OF STUDENT MILITARY TRAINING IN WEST JAVA: SENTIMENT & NETWORK ANALYSIS USING NLP METHODS

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ABSTRACT

This study assesses public perception of the "Student Military Barracks Program" in West Java by applying sentiment analysis and social network analysis to YouTube comment data. A total of 52,802 comments from nine relevant videos were collected and analyzed using the Google Cloud Natural Language API for sentiment classification and topic modeling to identify key issues. The results reveal that most comments are positive or neutral, with few negative responses. Positive sentiment generally highlights expectations for student discipline and behavioral improvement, while neutral comments reflect informative discussions. Negative comments, though minimal, focus on concerns regarding the policy's urgency and impact. Social network analysis shows inclusive and collaborative interaction patterns without actor domination. These findings indicate that the discourse develops participatively and democratically in digital spaces, highlighting the need for data-driven public communication strategies when managing sensitive policy issues.

Keywords: Digital Communication, Education Policy, Sentiment Analysis, Social Network Analysis

INTRODUCTION

The contemporary Indonesian education sector is confronted with serious challenges due to the increasingly complex manifestations of juvenile delinquency. This phenomenon encompasses not only bullying, brawls, and drug abuse, but also the involvement of students in motorcycle gangs and other criminal acts that threaten not only the school environment but also the future of the younger generation and broader social stability. Various efforts have been undertaken, ranging from the reinforcement of character education within the curriculum to psychosocial interventions, yet these measures have not yielded optimal results. Amid uncertainty in finding effective solutions, in May 2025, the Provincial Government of West Java, under the leadership of Governor Dedi Mulyadi, launched an innovative and controversial policy: the "Siswa Masuk Barak Militer" program.

This program is designed as a breakthrough in character development for students, particularly those deemed "problematic" by schools or parents especially those involved in severe disciplinary violations or criminal behavior that can no longer be addressed effectively through conventional mechanisms. Conceptually, this policy is not intended as a form of punishment, but rather as an educational approach grounded in discipline, responsibility, mental fortitude, and the inculcation of national values and patriotism. The program is implemented in collaboration with the Indonesian National Armed Forces (TNI), and uniquely, students' academic rights are preserved through the presence of teachers

who provide direct instruction in the barracks in accordance with the formal curriculum (Detik.com, 2025).

From the outset, the government has made concerted efforts to manage the public narrative and to emphasize that the program's objective is character building, not the militarization of children. However, the power of visual symbolism namely, the image of children in military uniforms within barracks has proven to have a greater impact in shaping public perception than official statements alone. Consequently, the term "Siswa Masuk Barak Militer," which is more provocative and memorable, has become the dominant label in public discourse, indicating a gap between policy intention and societal interpretation. A paradox is also evident in the aspect of student participation: although the government asserts that participation is voluntary with parental consent, in practice the program primarily targets children whose parents have openly admitted they are "no longer able to manage them," thus calling into question the validity of such autonomous consent (The Jakarta Post, 2025).

The program has rapidly polarized public opinion and sparked intense debate across various media platforms. Discourse mapping reveals two main, opposing narrative poles. On one hand, supporters—mostly comprised of laypeople and parents—advance pragmatic arguments and place hope in behavioral change through discipline. They perceive the program as a concrete solution amid the failure of other institutions. On the other hand, opponents—consisting of academics, activists, and policy observers—highlight the risks of a militaristic approach, which they regard as a shortcut, potentially traumatizing, and neglectful of underlying social issues and the principles of humanistic education. Pro-program discourse, characterized by emotional appeal, tends to go viral more readily on social media, while the more reflective and complex arguments of opponents often lose out in the narrative contest.

This situation accentuates a profound gap between expectations and reality, both in terms of narrative and policy effectiveness. The government hopes the policy will be perceived as character development, yet what has instead emerged is the image of "child militarization." Simultaneously, the hope that this program could serve as a definitive solution to juvenile delinquency clashes with the complex social realities, wherein root causes are often overlooked by such simplistic approaches. Ethical dilemmas also arise when the notion of voluntary participation is eroded by the reality that parental decisions are frequently made out of desperation, thereby making the voluntariness of participation itself debatable.

Beyond a single policy debate, the controversy surrounding the "Siswa Masuk Barak Militer" program reveals a fundamental tension in public policy formulation in the digital democracy era: the contest between the pragmatism of popular solutions and the universal principles of human rights and scientific rigor. In this context, a nuanced understanding of public perception becomes crucial, not only for evaluating policy but also as a reflection of societal values and anxieties. Digital platforms—especially the comment sections of news channels on YouTube—serve as principal arenas for discourse that unfolds organically, massively, and openly. These platforms represent a rich archive of public opinion, meriting thorough scholarly investigation.

The primary research question addressed in this study is: How are public perceptions, sentiments, and patterns of interaction regarding the "Siswa Masuk Barak Militer" program in West Java formed, negotiated, and polarized within the discursive space

of YouTube comment sections? Consequently, the research aims to comprehensively analyze public perceptions and the dynamics of discourse surrounding this program by integrating computational methods—Sentiment Analysis (based on Natural Language Processing/NLP) and Social Network Analysis (SNA)—applied to YouTube comment data.

It is anticipated that the findings of this research will provide data-driven input for evaluating and improving public communication strategies for both local and central governments, serve as an evidence-based advocacy resource for civil society organizations, and become a key reference for government communication practitioners in managing sensitive and emotionally charged policy issues.

Sentiment analysis is a principal branch of NLP aimed at identifying, extracting, and classifying opinions, emotions, and sentiments in unstructured text data (Cristescu et al., 2022). In recent years, this method has become an essential tool in the social sciences, especially for rapidly and broadly mapping public opinion (Sihombing et al., 2024). Recent studies have applied sentiment analysis to evaluate public responses to a variety of policies, including tax incentives (Anggraeni et al., 2023), the Public Housing Savings (TAPERA) policy (Sihombing et al., 2024), and tourism policies during the pandemic (Rinaldi et al., 2021). The findings show that sentiment analysis provides "critical input for policymakers" as it can capture the real-time pulse of public opinion and identify policy aspects that are supported or opposed (Sipayunga & Hakim, 2024). Sentiment analysis algorithms have evolved rapidly, from lexicon-based approaches (such as VADER, effective for informal social media text) to advanced machine learning and deep learning methods (e.g., Naïve Bayes, SVM, and BERT, which better capture sentence context). In this research, these approaches will be adopted to classify thousands of YouTube comments into positive, negative, and neutral categories.

Conversely, Social Network Analysis (SNA) provides a methodological paradigm for modeling and analyzing social relations in the form of networks consisting of nodes (actors, e.g., YouTube users) and edges (interactions, e.g., comment replies) (McPherson et al., 2001). In digital communication studies, SNA is utilized to visualize interaction patterns, identify opinion leaders, and detect community fragmentation or factional polarization within online discussions. Previous research has successfully employed SNA on YouTube comment data to reveal audience communication patterns in religious content (Rohimi, 2021), interaction analysis in political advertisements, and mapping actor networks in controversial film discussions. Centrality metrics such as degree, betweenness, and eigenvector centrality are key to analyzing actor roles, whether as hubs of interaction, bridges between groups, or principal influencers within the network. This study will employ these metrics to understand the structural and dynamic aspects of opinion networks in the discourse surrounding the "Siswa Masuk Barak Militer" program.

Theoretically, the analysis of findings will be interpreted through the lens of Jürgen Habermas's public sphere theory. This theory emphasizes the importance of spaces in social life where public opinion can be formed through rational, critical, and inclusive discourse (Hardiman, 2019). In the digital era, the concept of the public sphere has been adapted to understand the function of social media as a new public arena that enables mass and cross-boundary citizen participation. However, critical studies warn that the ideal expectation of a deliberative space is often constrained by the technical and social realities of digital platforms. Rather than fostering healthy discussion, social media can instead intensify fragmentation and polarization due to the effects of homophily—where individuals tend to

interact with like-minded peers—and personalization algorithms that create echo chambers or filter bubbles (Cinelli et al., 2021). Consequently, online discussions tend to reinforce polarization rather than nurture mutual understanding. This study utilizes this dualistic theoretical framework to interpret the structure of discussion networks: whether interactions in YouTube comment sections reflect a healthy deliberative space or instead reinforce fragmentation and polarization.

Furthermore, the issue of militarization is a crucial dimension in analyzing the "Siswa Masuk Barak Militer" policy. Militarization is defined as the process by which civil society is permeated by military values, logic, and practices, which, when applied in education, frequently draw criticism for conflicting with humanistic principles. Such practices typically manifest in military recruitment in schools, curricula emphasizing militaristic discipline, or the deployment of military institutions to handle student issues. Critics view this approach as antithetical to holistic education, which should prioritize the development of personality and creativity in children. From a developmental psychology perspective, adolescence is a formative period marked by identity crises. The placement of troubled adolescents in highly disciplined and potentially repressive barracks environments raises concerns about detrimental psychological effects, such as trauma, anxiety, or even future resistance to authority. This discourse also runs counter to the latest national educational philosophies, such as "Merdeka Belajar," which emphasizes autonomy, creativity, and student-centered learning. The results of this study are expected to provide a scientific, comprehensive, and data-driven answer to these issues in the digital democracy era, while offering substantive contributions to the development of theory and practice in public policy communication in Indonesia.

METHOD

This study integrates Communication Science and Data Science to analyze public opinion regarding the "Siswa Masuk Barak Militer" program by utilizing comment data from YouTube. Data were collected using the YouTube Data API v3, encompassing various comment attributes as well as video metadata. All analytical processes were conducted online via Google Colaboratory, with data cleaning procedures including the removal of empty comments, spam detection, and the filtering of inactive accounts. Comments that passed the selection criteria were analyzed using the Google Cloud Natural Language API to measure sentiment scores and magnitudes.

Subsequently, the comments were classified into positive, neutral, and negative categories, and visualized through various types of graphs and word clouds. In addition, sentiment analysis was strengthened by implementing topic modeling using machine learning algorithms such as Latent Dirichlet Allocation (LDA), enabling the identification of main topics within the comments and allowing researchers to examine the relationship between specific topics and the distribution of sentiments.
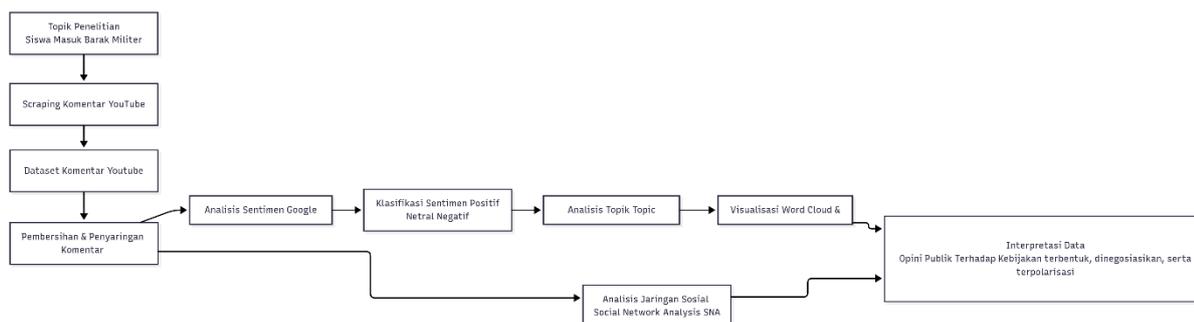
Figure 1 - Research flow Source: Data processed by researchers, 2025

Beyond sentiment analysis, this study also conducted social network analysis of comment authors using the Python library networkX. The interaction network was constructed based on user engagement with the same videos, and connection weights were calculated based on the number of videos co-commented by users. By applying metrics such as degree centrality and betweenness centrality, this study aims to identify the most influential users within the discussion, thereby enriching the understanding of the structure and dynamics of social interactions in YouTube comment sections and elucidating how public opinion is formed.

RESULTS AND DISCUSSION

The data utilized in this study are secondary data obtained from the YouTube platform. The researcher conducted a scraping process to extract user comments from nine specific YouTube videos relevant to the topic of "students entering military barracks," which served as the primary data source. These videos were selected based on their popularity (as indicated by user interactions) and the direct relevance of their content to the research subject.

Data collection was carried out automatically using the Python programming language and the YouTube Data API (v3). This API enables structured access to a wide range of YouTube data, including lists of comments and replies on public videos. For each identified video, a Python script was employed to send requests to the API to retrieve all top-level comments (comment threads) as well as their associated replies. The data extracted included the following attributes:

- Unique video ID *(video_id)*
- Video title *(video_title)*
- Unique comment ID *(comment_id)*
- Comment type *(main or reply)*
- Author *(username of the commenter)*
- Full comment text *(text)*
- Number of likes on the comment *(like_count)*
- Comment publication date and time *(published_at)*

During the collection process, multiple API keys were utilized to manage potential daily request quota limitations imposed by the YouTube Data API. An error handling mechanism was implemented to automatically switch to the next available API key in the event that a quota limit was reached or in cases of authentication and authorization errors (HTTP 403 Forbidden).

As a mitigation step for cases where retrieving the video title via the API failed (for instance, due to quota limitations or specific API errors), an alternative method was implemented using simple web scraping with the requests and BeautifulSoup libraries. This approach attempted to obtain the video title directly from the source code of the YouTube video web page. All comments collected from the nine videos were then consolidated into a single structured dataset in DataFrame format using the Python library pandas. The raw dataset was subsequently saved in Comma Separated Values (CSV) file format. This data collection process yielded a total of [N] comments prior to further preprocessing.

No.	YouTube Video Title	Number of Comments Extracted
1	DIANTAR ORANG TUANYA	PELAJAR MANIA T4WURAN MASUK BARAK RESIMEN 1 KOSTRAD	12.909
2	DEDI MULYADI ANTAR SISWA NAKAL IKUT PENDIDIKAN DI BARAK MILITER	5.569
3	DEDI MULYADI BUAT PROGRAM WAJIB MILITER UNTUK ANAK NAKAL DI JABAR	2.531
4	MOMEN 39 PELAJAR 'KHUSUS' Masuk Barak Militer di Purwakarta	3.665
5	39 Siswa "Nakal" Dibina di Barak Militer: Solusi Disiplin atau Langgar Hak Anak?	4.325
6	Dedi Mulyadi Mulai Kirim Pelajar Nakal ke Barak Militer	1.327
7	Program Wajib Militer untuk Anak Nakal Dimulai Mei 2025	752
8	Bupati Purwakarta Jawab Kritik Komisi X DPR & FSGI	13.479
9	AURA ALUMNI 2024 SMAN 1 CIKARANG UTARA	8.245
	Total	52.802

Tabel 1 - Youtube Comment Data Table, Source: Data processed by researchers, 2025

From a total of 52,802 comments collected from various YouTube video sources, a data cleaning process was conducted. This stage began with the handling of missing values, in which comments without text were assigned an empty string and authors without a name were labeled as "Anonymous." Subsequently, a filtering process was carried out to remove irrelevant content. Using keyword and pattern matching methods, three categories of comments were identified and excluded from the dataset: (1) empty comments, (2) comments identified as spam or promotional content, and (3) comments containing references to online gambling. This process resulted in a final dataset comprising 51,731 clean and relevant comments for further analysis. The cleaned comment dataset was then analyzed using the Google Cloud Natural Language API to assess sentiment polarity. Each comment was assigned a sentiment score (ranging from -1.0 to +1.0) and a sentiment magnitude. Based on the score, each comment was classified into one of three categories:

- Positive : comments with a sentiment score ≥ 0.1
- Negative : comments with a sentiment score ≤ -0.1
- Neutral : comments with a sentiment score of 0

The outcome of this process is a dataset enriched with sentiment labels ("Positive," "Negative," "Neutral") for each comment, along with the corresponding sentiment score and magnitude. This final dataset serves as the basis for quantitative analysis of the distribution of public sentiment regarding the research topic.

Tabel Total Sentimen dan Rata-rata Confidence Score Keseluruhan:

	Kategori Sentimen	Total Komentar	Rata-rata Confidence Score
0	Positif	27588	0.44
1	Netral	19719	0.02
2	Negatif	4424	0.19
3	Keseluruhan	51731	0.33

Figure 2 - Sentiment Score, Data processed by researchers, 2025

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No     text sentimen                                    Sentimen
26796  ibu dewan yang terhormat itukan anak" dititipi...  Negatif
41002  Tak anggep kentut omongan ibu ini, bau dan ngg...  Negatif
40745  Pak Gub , pak bupati .. jangan harapkan elit b...  Negatif
29129  ini yang di namakan malayikat  tidak bersayap....  Negatif
29782          Ngawur TV One.kok di bilang wajib militer.  Negatif
40849  Kalau udah jadi sampah di pungut susah jadi emas  Negatif
27628  Kaji" We lh bu kalilaan, ibu d dpr selama ini ...  Negatif
44050  Terharu sama bapa aing sumpah, knapa gak semua...  Negatif
25458  Kdr PDI memang selalu berdrama , sok perhatian...  Negatif
17491       Wacana baguus, masyarakat nya ridho gk, wkwk  Positif
22539  Ini akan menjadi program percontohan buat wila...  Positif
36630  Tak doakan anak apa cucu mu nakal pol, ben nge...  Positif
17456                                                      Positif
9939   Haha enak kn di kawal kepolisian dan tentara ....  Positif
530    2 bulan mungkin cukup pak, biar merata dan tid...  Positif
26873  Maju terus pak kdm pak bupati, kami rakyat jab...  Positif
50741                                                  Up  Positif
8244       Iya pengin sih setiap kabupaten pasti banyak  Positif
8046   BALI hadir ,,, aku warga bali lihat terus KDM ...  Positif
47978  Dangu Ken Tah BPK aing negara di bejer beras K...  Netral
43742  Pk Dedi terimakasih atas programnya,saya punya...  Netral
39717  Bu ibu kmna aja sampe banyak pljar yg tawura b...  Netral
1279                                                 Jos  Netral
25141  #Klau kau gk sanggup bantu banyak anak., bantu...  Netral
32810  Coba itu ada kasus pembacokan! Orang tua anak ...  Netral
29691  Ah pasti nanti banyak yg benci org baik spert...  Netral
25995  Wooiii my esti wijayanti.. \nJangan cuman bisa...  Netral
28382  Laki2 yang protes atas kebijakan KDM yang ini....  Netral
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The sentiment analysis conducted on public comment data from social media and digital platforms provides a clear depiction of societal perceptions regarding the discourse on military training for students in West Java.
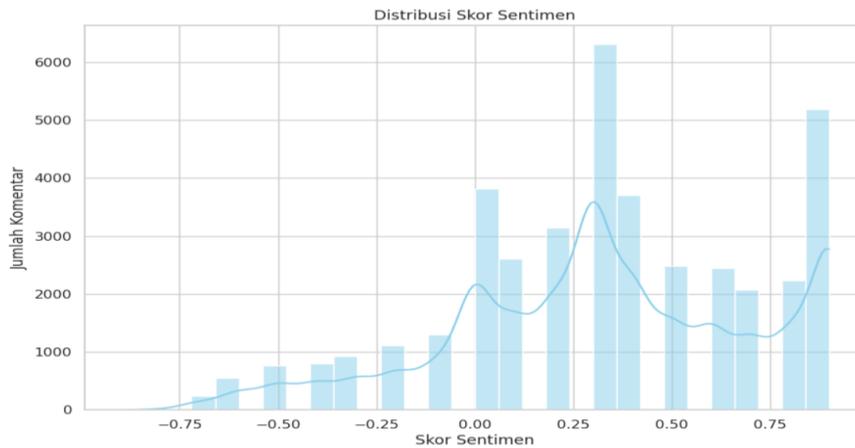
Figure 3 - Sentiment Score Distribution Results of Data Processing using Google Natural Languge API with Python, 2025

Based on Figure 3 (Sentiment Score Distribution), it can be observed that sentiment scores tend to be distributed toward the positive end of the spectrum, although the full range from negative to positive is represented. The majority of comments exhibit sentiment scores above zero, indicating that public sentiment is generally neutral to positive. The highest concentration is found within the moderate positive score range (approximately 0.25 to 0.75), with a significant number of comments also falling within the neutral category. In contrast, comments with negative sentiment scores are very limited, suggesting that negative perceptions are relatively minimal.
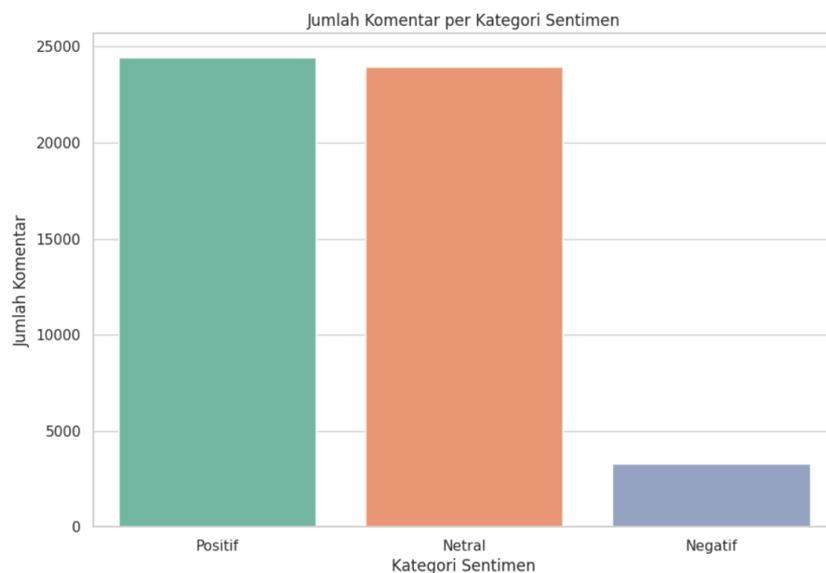

Figure 4 - Total Comments per Sentiment Category, Data Processing using Google Natural Languge API with Google Colab, 2025

These findings are further supported by Figure 4 (Number of Comments per Sentiment Category), which demonstrates that the majority of comments fall into the positive and neutral categories. The number of positive and neutral comments is nearly equal, each exceeding 23,000 comments, while negative comments are very limited—constituting only about one-sixth of the other two categories. This underscores that public

opinion toward military training for students in West Java is generally well-received or, at the very least, does not provoke significant controversy within society.

When considered together, the predominance of positive and neutral sentiment scores indicates that the military training policy is met with either support or, at a minimum, acceptance from the public. The scarcity of negative comments suggests low social resistance to the policy. However, the sizeable proportion of neutral comments also implies that a segment of the population has yet to express a clear stance, either in support of or opposition to the program.

These findings have important implications for understanding public perception. The joint dominance of positive and neutral sentiments suggests that the climate of opinion is not only supportive but also highly informative and discursive. The large volume of neutral comments indicates that most public interactions do not merely consist of praise or endorsement, but also include questions, dissemination of factual information, or unbiased discussions. This suggests that public perception of the program is based not only on emotional acceptance (positive) but also on cognitive engagement and information-seeking (neutral), whereas rejection or criticism (negative) accounts for only a very small portion of the overall conversation. Further analysis of public perceptions regarding military training for students in West Java considers not only the distribution of sentiment categories but also examines temporal trends and the intensity of sentiments as reflected in public comments.
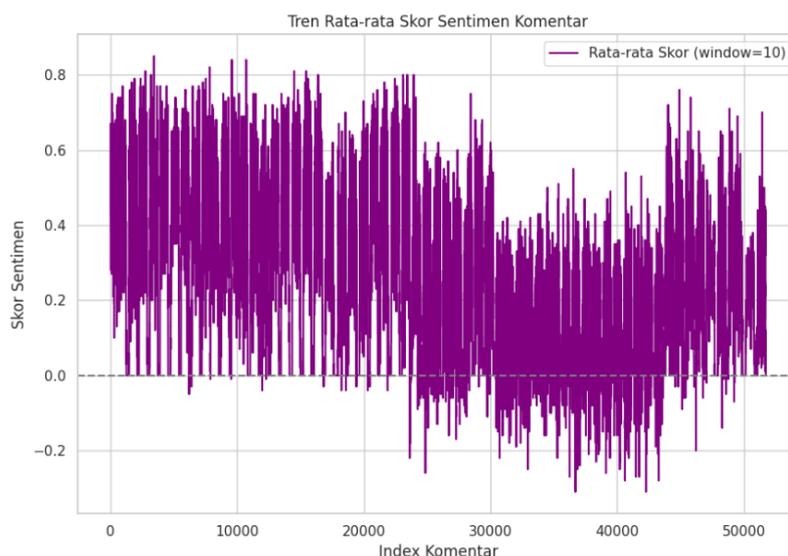

Figure 5 – Data Processing using Google Natural Languge API with Google Colab, 2025

Based on Figure 5 (Trends in Average Sentiment Score of Comments), it can be observed that public sentiment scores exhibit considerable fluctuations over time. At the initial stages of the comment index, the average sentiment score tends to be high (predominantly positive). However, as the number of comments increases, a decline in the average sentiment score is observed, approaching or even falling below the neutral value (0). This indicates a dynamic in public opinion that may be influenced by various factors such as event momentum, media discourse, or the emergence of particular issues that trigger shifts in sentiment. Nevertheless, at certain points, the sentiment score rises again, indicating a rebound or a restoration of more positive public perception.
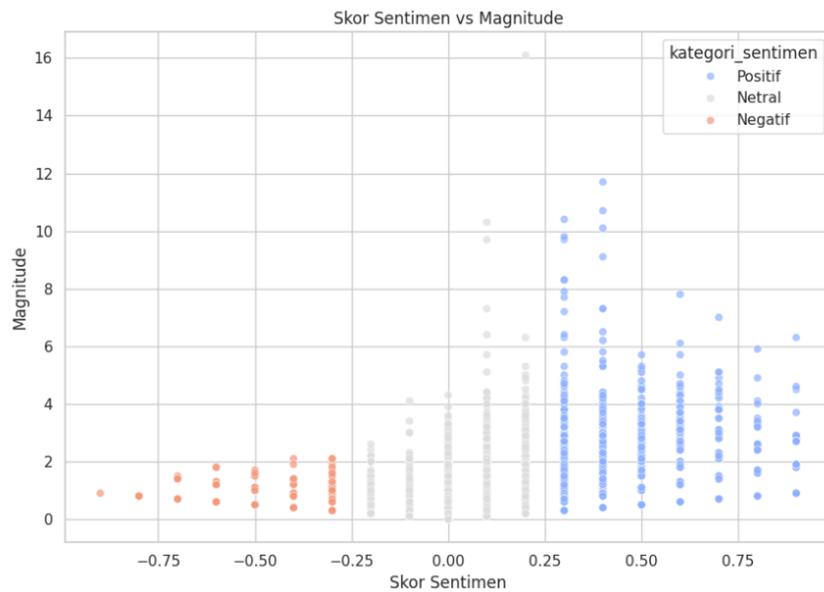
Figure 6 - Sentiment Score vs Magnitude, Data Processing using Google Natural Languge API with Google Colab, 2025

Subsequently, the analysis of Sentiment Score versus Magnitude aims to provide an overview of the intensity or strength of emotion contained within each comment. It is evident that comments with positive sentiment scores generally exhibit higher magnitudes, indicating strong expressions of support or enthusiasm for the student military training program. Neutral comments are distributed within the medium magnitude range, while negative comments tend to have lower magnitudes, reflecting less intense expressions of disagreement compared to positive comments. This reinforces the finding that, in addition to the majority of the public displaying positive or neutral attitudes, positive expressions are generally more forceful and emotional, whereas negative expressions are not only fewer in quantity but also less intense. Public perception is dynamic and not always stable; however, it is generally dominated by high-intensity positive sentiment.

Declines in sentiment at certain points may serve as early warning signals for policymakers or relevant stakeholders to conduct timely public communication interventions, in order to maintain public image and support. On the other hand, the strong positive sentiment constitutes an important form of social capital in sustaining the continuity of the student military training policy. To gain a deeper understanding of public perceptions regarding the student military training policy in West Java, this study also analyzes the most frequently occurring words in comments with negative and positive sentiment through word cloud visualizations.

Figure 7 - Data Processing using Wordcloud, 2025

The word cloud analysis of public comments regarding the student military training program in West Java demonstrates that positive perceptions are quite dominant within public discourse. In the word cloud for positive comments, terms such as "setuju," "anak," "kdm," "program," "pak," "semoga," "baik," "tni," "mantap," and "jabar" appear with high frequency. The predominance of "setuju" highlights that many members of the public support this policy, viewing it as a solution for fostering character and discipline among the younger generation. Additionally, the presence of "baik," "mantap," and "semoga" reflects public hope and optimism for the future benefits of the military training program. The terms "tni" and "jabar" emphasize the regional focus and the role of the TNI institution in policy implementation.

Public support for this program is also based on concern for "anak" as the nation's next generation. Words such as "anak," "guru," "pendidikan," and "disiplin" that also appear indicate that many people perceive the program as having a positive impact on the character and education of students in West Java. Furthermore, the presence of "program," "solusi," and "dukung" demonstrates that the public regards military training as one of the concrete efforts by the local government to address juvenile delinquency and the moral crisis among students.

Figure 8 - Data Processing using Wordcloud, 2025

However, behind this strong support, the word cloud analysis of negative comments reveals the existence of a segment of society that still questions the effectiveness and urgency of this program. The most frequently appearing words in negative comments are "bukan," "malah," "jangan," "dulu," "doang," "kerja," as well as institutional names such as "dpr" and "rakyat." The presence of "bukan" and "malah" indicates resistance and disagreement, and even concerns that this policy might create new problems rather than provide solutions. The words "solusi," "kerja," and "program" in a negative context typically emerge as criticism or alternative suggestions, for example, advising the government to focus more on job creation, educational reform, or the enforcement of discipline without the need for military training.

The main issues in negative comments remain rooted in concerns about children and families. Words such as "anak," "ibu," "tua," and "sekolah" are frequently associated with criticisms of the program, such as perceptions that parents are not sufficiently involved or that the policy is not well-targeted. Moreover, the appearance of terms like "dpr," "rakyat," and "elit" points to distrust regarding the motivations and policy-making processes, with some even linking it to certain political interests. The researcher also conducted topic modeling analysis to examine how these issues relate to public sentiment toward the student military barracks program.

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=== Top 10 Kata Tiap Topik (Tabel) ===
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	Topik	Top 10 Kata
0	Topik 1	anak, militer, setuju, orang, tua, bagus, bara...
1	Topik 2	anak, sekolah, ya, tawuran, kpai, nakal, tni, ...
2	Topik 3	mantap, dedi, kang, gubernur, indonesia, semog...
3	Topik 4	orang, kdm, ngomong, solusi, doang, retno, dpr...
4	Topik 5	kdm, kpai, gubernur, aing, jawa, barat, dpr, j...

Figure 9 - Data Processing using LDA in Python, 2025

The results of topic analysis using NLP methods on public comments related to the student military training policy in West Java reveal a diversity of issues that serve as focal points in public discourse. The first table presents the top 10 keywords that most frequently appear within each of the five main identified topics. For example, Topic 1 is dominated by words such as "anak," "militer," "setuju," "orang," and "bagus," indicating sentiment of support for the program as well as concern for the policy's impact on children. Topic 2 features words such as "sekolah," "tawuran," "nakal," and "kpai," highlighting concerns regarding adolescent behavior and the role of child protection institutions. Meanwhile, Topic 3 contains more positive words such as "mantap," "semoga," and "indonesia," signifying optimism and hope for the program's success. Topics 4 and 5 raise issues regarding solutions, the role of government, and discussions around policy implementers, with terms such as "gubernur," "dpr," and "kdm."

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=== Distribusi Jumlah Komentar per Topik (Tabel) ===
     Topik  Jumlah Komentar
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	Topik	Jumlah Komentar
0	Topik 1	14398
1	Topik 2	8046
2	Topik 3	8853
3	Topik 4	10736
4	Topik 5	8967

Figure 10 - Data Processing using Python, 2025

The second table presents the distribution of comment counts for each topic. "Topik 1" contains the highest number of comments (14,398), indicating that "militer" and "anak" are the primary concerns in public discourse. This is followed by "Topik 4" (10,736 comments), which is dominated by discussions surrounding "solusi" and the roles of related institutions, as well as "Topik 3" (8,853 comments), which highlights optimism toward the program. "Topik 5" and "Topik 2" also attracted considerable attention, with 8,967 and 8,046 comments, respectively.

The central issues driving public sentiment are largely related to "anak-anak," the roles of institutions ("militer," "pemerintah," "DPR," "KPAI"), student behavior ("tawuran," "kenakalan"), as well as discourse on "solusi" and expectations for the future. The predominance of topics with a positive tone, such as "dukungan," "harapan," and "solusi," is consistent with previous sentiment analysis findings indicating that public perception of the student military training program tends to be positive or neutral. Nevertheless, there remains space for concern and criticism, particularly regarding the policy's implementation and its impact on "anak-anak."

One of the main objectives of the social network analysis (SNA) in this study is to map patterns of interaction and influence among key actors involved in public discussions about "pelatihan militer mahasiswa" in West Java. It also aims to determine the extent to

which discourse is centralized or decentralized, as well as the potential roles of key actors as opinion disseminators or communication bridges within the network.
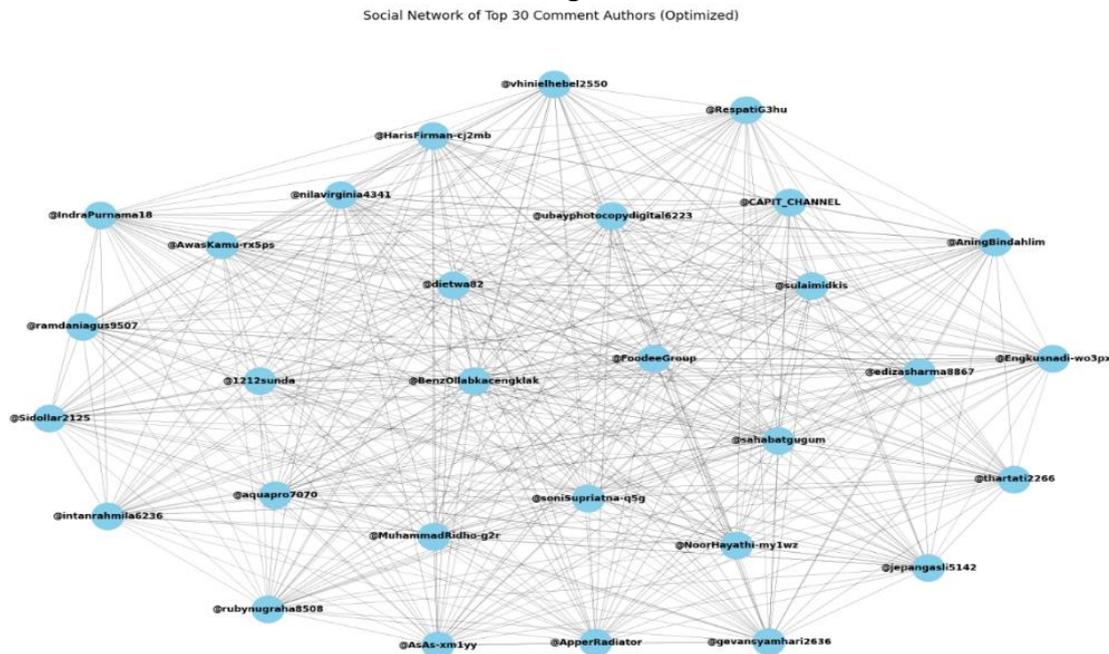

Figure 11 - Data Processing using SNA in Python Google Colab, 2025

The social network visualization of the 30 most active comment authors reveals that the resulting network is densely connected. Each node represents a commenter's account, while the connecting lines (edges) indicate interactions, whether in the form of replies, mentions, or participation in the same conversation. No single actor dominates the network; almost all nodes are interconnected, either directly or indirectly, indicating an inclusive and collaborative pattern of interaction.

This analysis demonstrates that discussions regarding student military training evolve organically and horizontally, without a dominant opinion center. The dissemination of information, opinions, and sentiments can occur rapidly and involve a wide range of actors on an equal footing. Consequently, the potential for issue virality and knowledge transfer within the community increases, while also allowing for open dialogue from multiple perspectives.

The results of this social network analysis reinforce the previous findings from sentiment and topic analysis, indicating that public discourse is dynamic and not controlled by a handful of actors. This finding is significant for policymakers, as in a network structure that is inclusive and tightly connected, both support and criticism can spread widely. By understanding these social network patterns, stakeholders can design more effective, participatory, and responsive public communication strategies that are attuned to the dynamics of public opinion.
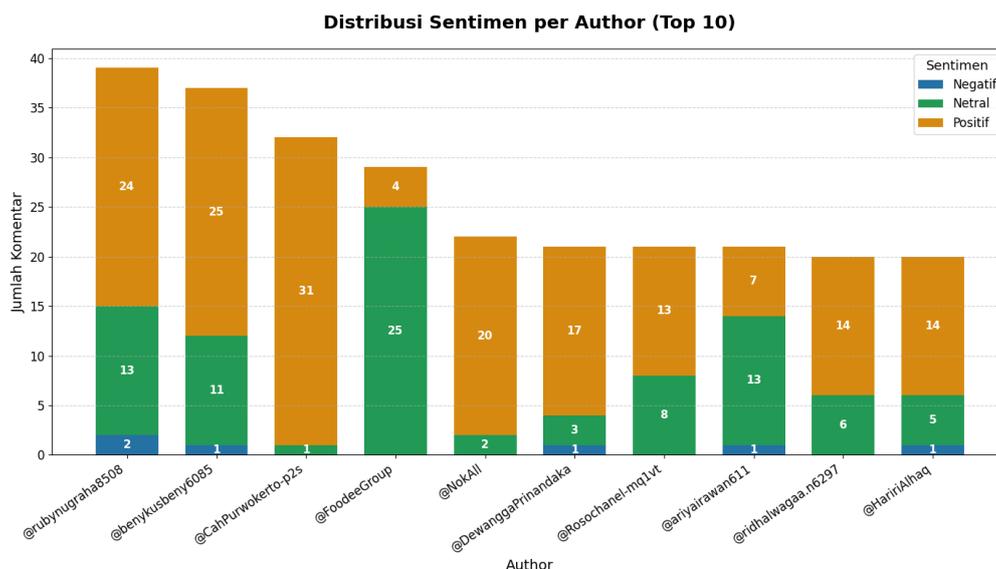
Figure 12 - Data Processing using Python Google Colab, 2025

Sentiment distribution analysis among the ten most active comment authors reveals variations in sentiment tendencies among the principal actors in public discussions regarding the student military training policy in West Java. The sentiment distribution graph by author shows that the majority of these authors predominantly contribute comments with positive and neutral sentiment. For instance, accounts such as @CahPurwokertoP2s and @DewanggaPrimandaka contribute almost exclusively positive comments, while accounts such as @FoodeeGroup and @ariyairawan611 have a large proportion of neutral comments. The number of negative comments from all the most active authors is very minimal, further reinforcing previous findings that public perceptions of this policy are largely characterized by support or acceptance and rational discussion, rather than rejection.

This tendency for sentiment to be dominated by positive and neutral tones aligns with the results of the social network analysis (SNA) of the most active commenters. In the network visualization, the main actors form a densely connected structure, without a single account dominating. This level of connectivity indicates the occurrence of horizontal dialogue, in which opinions, support, and even criticism are distributed evenly throughout the community. Every actor in the network has the potential to be a source of influence; however, there is no extreme centralization, so the narratives that develop tend to be more inclusive and democratic.

The relationship between sentiment distribution and social network structure demonstrates that the role of the most active authors in the discussion ecosystem is significant not only in voicing opinions, but also in connecting and disseminating information and sentiment collectively. This pattern further supports the argument that public perceptions of the student military training policy are constructed collaboratively through cross-actor engagement and dynamic, open interactions. Thus, in terms of both sentiment distribution and social network patterns, public discourse on this policy takes place within a healthy, participatory, and constructive ecosystem.

The findings of this study indicate that public discourse on social media concerning the student military training policy in West Java is dominated by positive and neutral

sentiment, with negative sentiment appearing only in a small proportion. This finding is particularly relevant when examined through the lens of digital public sphere theory, which emphasizes that online discussion spaces are open, dynamic, and inclusive, with no geographic or institutional boundaries (Soffer & Gordoni, 2020). In the digital public sphere, every individual can actively participate in shaping opinions and sharing information, resulting in a more egalitarian exchange of views.

The social network visualization reveals a highly connected horizontal pattern of interaction among actors, without central dominance by any individual or group. This underscores the characteristics of a participatory and democratic digital public sphere, where every user has an equal opportunity to express opinions and influence policy discourse. Such openness and the intensity of participation are vital for building public opinion that is pluralistic and reflective, as described by Soffer & Gordoni (2020).

The dominance of positive and neutral sentiment also demonstrates that the digital public sphere is not always an arena for polarization, but rather a space for rational discussion and critical information seeking. This finding is consistent with (Chan et al., 2021), who highlight the role of social media as a space for collective deliberation in social decision-making processes. The prevalence of neutral sentiment indicates a tendency for the public to discuss issues informatively without becoming entrenched in emotional support or opposition.

Furthermore, agenda-setting theory in the social media era is highly relevant for explaining the dynamics of emerging public opinion. Agenda setting is now influenced by algorithms, virality, and user interactions, not merely by mainstream media (Feezell, 2018). The dominance of keywords such as "setuju", "program", "anak", "TNI", and "Jabar" in the word cloud, as well as the supportive discussion topics revealed through topic modeling, illustrate how certain issues gain legitimacy in the digital space (Hedman & Djerf-Pierre, 2019). Accordingly, the interconnection between sentiment, discussion agenda, and social network structure can be explained through the integration of digital public sphere theory and agenda-setting theory.

CONCLUSION

Public perceptions of the "Siswa Masuk Barak Militer" program in West Java, as reflected in YouTube comment sections, are generally formed through discursive dynamics that are predominantly supportive and informative. Sentiment analysis reveals a dominance of positive and neutral comments, with very few negative remarks. The distribution of sentiment scores skews toward the positive, and the high magnitude of positive comments indicates that the public not only accepts the policy but also expresses strong and emotional support. Conversely, the substantial number of neutral comments demonstrates that the discussion space is also utilized for sharing information, asking questions, and providing rational opinions. The word cloud and the topics identified through topic modeling reveal a diversity of issues under discussion, ranging from character building and juvenile delinquency to the roles of state institutions, indicating that public perceptions are shaped through a complex and complementary spectrum of narratives.

The structure of public interaction within the discursive space of YouTube comments further reinforces these findings. Social network analysis shows that the discussion takes place in a horizontal and inclusive manner, without central domination by any particular actor. This suggests that public perceptions and sentiments are formed

through a collaborative and egalitarian process, consistent with the principles of the digital public sphere. The variation in sentiment among the most active commenters and the highly connected network structure reflect that opinion negotiation and exchange of views occur openly, democratically, and dynamically. Thus, this program does not generate extreme polarization within the online community but instead fosters a relatively healthy deliberative space, where support, criticism, and information coexist as part of a reflective social process.

REFERENCES

Anggraeni, T., Pratama, F., & Nuraini, N. (2023). Analisis sentimen masyarakat terhadap insentif pajak menggunakan Twitter dan NLP. *Jurnal Ekonomi Dan Teknologi Digital*, *5*(2), 80–92.

Chan, M. P. S., Jones, C. R., Hall Jamieson, K., & Albarracín, D. (2021). Debunking: A meta-analysis of the psychological efficacy of messages countering misinformation. *Psychological Bulletin*, *147*(4), 314–338. https://doi.org/10.1037/bul0000304

Cinelli, M., Morales, G. D. F., Galeazzi, A., Quattrociocchi, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, *118*(9), e2023301118. https://doi.org/10.1073/pnas.2023301118

Cristescu, M., Turcu, C. O., & Dragomir, V. D. (2022). Sentiment analysis in social media—A comprehensive review. *Sustainability*, *14*(13), 7954. https://doi.org/10.3390/su14137954

Detik.com. (2025). *Siap-siap, pendidikan karakter di barak TNI bakal menyasar orang dewasa*. https://www.detik.com/edu/detikpedia/d-7903910/siap-siap-pendidikan-karakter-di-barak-tni-bakal-menyasar-orang-dewasa

Feezell, J. T. (2018). Agenda setting through social media: The importance of incidental news exposure and social filtering in the digital era. *Political Research Quarterly*, *71*(2), 482–494. https://doi.org/10.1177/1065912917744895

Hardiman, F. B. (2019). *Habermas: Ruang Publik, Rasio, dan Demokrasi Deliberatif*. Kanisius.

Hedman, M., & Djerf-Pierre, M. (2019). News values and news selection. In K. Wahl-Jorgensen & T. Hanitzsch (Eds.), *The Handbook of Journalism Studies* (2nd ed., pp. 367–385). Routledge. https://doi.org/10.4324/9781351053499-25

McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, *27*, 415–444. https://doi.org/10.1146/annurev.soc.27.1.415

Rinaldi, M., Sudirman, A., & Hafiz, F. (2021). Sentiment analysis of public perception toward tourism policies during COVID-19 pandemic. *International Journal of Tourism Policy*, *10*(1), 33–45.

Rohimi, I. (2021). Social network analysis of YouTube comments: Communication patterns in religious content. *Jurnal Komunikasi Digital*, *9*(2), 85–99.

Sihombing, S. O., Siregar, N. N., & Rizki, M. (2024). Sentiment analysis of public response to TAPERA policy using machine learning. *Journal of Policy Analysis*, *13*(1), 45–62.

Sipayunga, A., & Hakim, F. (2024). Big data sentiment analysis for policy evaluation: A case study of Indonesian government. *Journal of Policy Informatics*, *8*(1), 1–15.

Soffer, O., & Gordoni, G. (2020). The digital public sphere: Challenges and prospects in the new media age. *New Media & Society*, *22*(1), 205–222. https://doi.org/10.1177/1461444819868860

The Jakarta Post. (2025). *Govt could expand program sending troublesome students to military barracks: Minister*. https://www.thejakartapost.com/indonesia/2025/05/11/govt-could-expand-program-sending-troublesome-students-to-military-barracks-minister.html