

The Effectiveness of Instagram Account @environment in Fulfilling Climate Change Information Needs in Indonesia

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Abstract

Every individual requires information daily, which is essential for decision-making and managing daily activities. Climate change has become a widely discussed topic due to its detrimental effects on the Earth, including deforestation, air pollution, water pollution, and global warming. Human activities, such as the use of fossil fuels and deforestation, play a significant role in accelerating climate change. Studies indicate that people in Indonesia are increasingly aware of climate change, though their understanding remains limited. Social media platforms, particularly Instagram, have emerged as vital tools for disseminating information about climate change. This study aims to evaluate the effectiveness of content from the Instagram account @environment in fulfilling the information needs of its followers in Indonesia regarding climate change. Grounded in concepts of communication effectiveness and climate change, the study adopts a descriptive quantitative approach within a positivist paradigm. The sample comprises 400 respondents who follow the @environment Instagram account in Indonesia. Data was gathered using a Google Form and analyzed using SPSS. The results of the descriptive statistical analysis indicate that the content shared by the Instagram account @environment is effective. Respondents find the content useful, reliable, and engaging. A simple linear regression analysis reveals that the effectiveness of social media content significantly influences the fulfillment of followers' information needs.

Keywords: Content Effectiveness, Social Media, Information Needs, Climate Change.

INTRODUCTION

Information is an essential part of daily life, from morning until night. It plays a crucial role, especially in supporting decision-making. One area of information that deserves particular attention is environmental issues. Environmental problems, such as climate change, have significant negative impacts on life on Earth (Siwi, 2023). Climate change is a long-standing issue, but it is currently exacerbated by human activities such as the use of fossil fuels and deforestation (Hermon, 2017). This aligns with the statement made by Rille Dunlap, an environmental expert from the United States, at the 2019 International Conference on Climate Change. He stated that human behavior is the primary driver of Earth's destruction, particularly due to short-term thinking that assumes natural resources are abundant and can be used without limits. The impacts of climate change include disruptions to the water cycle, seasonal anomalies, and natural disasters (Nugroho, 2016). Surveys show that people, including those in Indonesia, are increasingly aware of climate change, with many expressing

concern about its future consequences (Change.Org, 2020).

Social media platforms, including Instagram, play a significant role in disseminating information about climate change (Okonwo & Awad, 2023). One Instagram account that focuses on this topic is @environment. However, the extent to which the account's content effectively fulfills the information needs of its followers, particularly regarding climate change, remains unclear. This study is supported by two conceptual frameworks: communication effectiveness and the fulfillment of information needs. According to Hidayat (1986) in Syabrina (2018), communication effectiveness refers to the extent to which communication goals are achieved in terms of quantity, quality, and timeliness. The higher the achievement of the targets, the greater the level of effectiveness. In this study, communication effectiveness is measured using six key dimensions (Hardjana, 2000):

- a. Recipient or User: The desired recipient of the message is selected based on appropriate criteria aligned with the sender's objectives. If the audience matches the target of the media's goals, the next step is to evaluate how effectively the audience uses the media to meet their needs.
- b. Message Content: The primary focus is on the consistency between the direction of communication and the truth and relevance of the information received by the audience. In this context, the message content refers to the information presented by the organization to its audience.
- c. Timeliness: The message is delivered to the recipient at the right time, taking into account the context and ongoing situations.
- d. Media: The chosen medium for delivering the message is tailored to the needs and expectations of both the sender and the recipient.
- e. Format: The suitability of the format between the sender's intent and the recipient's perception can be observed through the way the information is conveyed.
- f. Message Source: The source must be credible to ensure that the message delivered is accurate.

Meanwhile, the concept of fulfilling information needs encompasses five main indicators that define an individual's requirements and guide them toward personal fulfillment. These indicators help identify key aspects necessary to achieve individual satisfaction. The five indicators are (Effendy, 2003):

- a. Cognitive Needs: These relate to understanding, insights, or information. They stem from the desire to comprehend and control one's environment and to satisfy curiosity

that drives exploration.

- b. Affective Needs: These involve the need to enhance aesthetic experiences, pleasure, and emotions.
- c. Social Integrative Needs: These pertain to strengthening connections with family and friends, driven by the desire for affiliation.
- d. Tension Release Needs: These focus on finding ways to relieve stress and tension, as well as the desire for variety.
- e. Personal Integrative Needs: These are associated with reinforcing integrity, self-confidence, stability, and individual well-being.

Previous studies, such as Markus's thesis (2022), reveal that climate activists utilize Instagram to promote environmentally friendly behavior. Research by Mavrodieva et al. (2019) from Keio University demonstrates that social media can raise public awareness and influence political processes related to climate change. Meanwhile, a study by Puspita and Samatan (2022) shows that effectiveness significantly impacts the fulfillment of information needs. Similarly, research by Lubis and Utami (2022) indicates that Instagram accounts have a positive effect on the effectiveness of fulfilling information needs.

Although many studies have explored how social media can influence environmentally friendly actions and raise awareness, only few have specifically examined the effectiveness of Instagram accounts in fulfilling followers' information needs regarding climate change. This study aims to assess the effectiveness of the Instagram account @environment in addressing followers' information needs related to climate change. Therefore, the research problem in this study is: how effective is the Instagram account @environment in fulfilling the information needs of its followers in Indonesia regarding climate change? The objective of this study is to determine the extent to which the content on the Instagram account @environment effectively meets the information needs of its followers concerning climate change.

METHOD

The research paradigm employed in this study is positivism. According to Neuman (2016), the positivist paradigm emphasizes discovering cause-and-effect laws, careful observation based on empirical evidence, and research that is free from subjective values. This study adopts a quantitative research approach. Quantitative methods are used to test objective theories by examining relationships between variables, which are typically measured using instruments, and the data is analyzed numerically through statistical methods

(Creswell, 2014). Furthermore, this research is descriptive, aims to systematically and accurately define the facts and characteristics of a population or area (Neolaka, 2016).

The unit of analysis in this study is individuals who follow the Instagram account @environment. The researcher aims to analyze the effectiveness of the visual content on the Instagram account in fulfilling information needs related to climate change. The population for this study includes followers of the Instagram account @environment, with sampling conducted using a non-probability sampling method. The sample characteristics include individuals who are Indonesian citizens, follow the Instagram account @environment, and are interested in or engaged with climate change issues. A total of 400 respondents were selected as the sample. The data was collected through an online questionnaire distributed via Google Forms questionnaire distributed through Instagram, WhatsApp, and Twitter, and subsequently processed using SPSS to test validity and reliability.

Variable	Dimension	Indicator	Scale
Effectiveness of Social Media Content	Recipient	Active followers of the Instagram account	Ordinal
		Frequently view the account every time they open Instagram	Ordinal
		Often give likes or comments	Ordinal
	Message Content	The message is clearly received	Ordinal
		Understand climate change content	Ordinal
		Gain benefits from the content	Ordinal
	Timeliness	Content is uploaded regularly	Ordinal
		Content is always updated	Ordinal
	Media	The media is effective and efficient	Ordinal
		Maximizes features such as Feeds and Reels	Ordinal
		Suitable as a medium for climate change information	Ordinal
	Format	Attractive image/video design	Ordinal
		Complete information	Ordinal
		Concise and simple format	Ordinal
	Message Source	Accurate message	Ordinal
Includes references or data sources		Ordinal	
Credible		Ordinal	
Fulfillment of Information	Cognitive Needs	Information from the Instagram account is useful	Ordinal
		Answers curiosity about climate change	Ordinal
		Triggers curiosity about climate change	Ordinal
	Affective Needs	Content is both entertaining and informative	Ordinal
	Social Integrative Needs	Content serves as a topic of discussion with family or relatives	Ordinal
		Actively participates in discussions in the comments section	Ordinal
	Tension Release Needs	Opens the account to relieve stress and spend leisure time	Ordinal
	Personal Integrative Needs	Information boosts confidence in addressing climate change issues	Ordinal
		Helps increase pride as an individual who cares about climate change	Ordinal
		Builds confidence in contributing to efforts to reduce the impact of climate change	Ordinal

Table 1. Concept Operationalization

Source: Research Results, 2024

RESULTS AND DISCUSSION

Climate change is a significant global challenge affects nearly every part of the world. Human activities, such as the use of fossil fuels and deforestation, increase greenhouse gas emissions, causing extreme weather events like droughts and storms. In Indonesia, many people are aware of the impacts of climate change and express concern about its effects.

Instagram is one of the platforms used to share information about climate change. The @environment Instagram account, managed by the organization Impact, regularly shares content on environmental issues and encourages its followers to care more about the environment. The Instagram account @environment focuses on climate change issues and is part of a non-governmental organization called Impact, founded by Tim Chau and Michelle Andrews in 2017. With over 857,000 followers, the account is managed by young environmental enthusiasts and has received several prestigious awards. It aims to inspire young generations to care for the environment and actively contribute to positive change. This account frequently posts informative content on climate change, such as highlighting the role of U.S. Vice President Kamala Harris, who has long supported climate initiatives and actively advocates for climate policy campaigns. One such post received a total of 182,000 likes and over 2,000 comments. These posts, often in the form of aesthetic, concise, and clear Reels and Feeds, generate significant discussion in the comments section. Although the number of likes and comments reflects the popularity of the content, further research is needed to determine whether it effectively fulfills the information needs of followers in Indonesia.

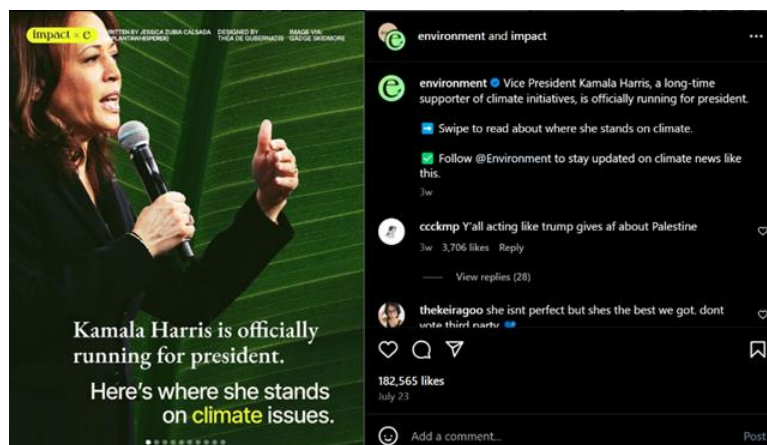


Figure 1. Screenshot of a Post from the Instagram Account @environment
Source: Instagram.com, 2024

This study surveyed 400 followers of the @environment Instagram account in Indonesia, consisting of 268 (67%) female respondents and 132 (33%) male respondents. The respondents were categorized by age as follows: 237 (59.3%) were aged 18 to 24 years, 102 (25.5%) were aged 25 to 34 years, 46 (11.5%) were under 18 years old, and 21 (5.3%) were over 34 years old. It can be concluded that the majority of respondents were female followers of the @environment Instagram account, primarily aged between 18 and 24 years. This study aims to evaluate the effectiveness of this account in fulfilling its followers' information needs

regarding climate change. The findings reveal a strong correlation between Communication Effectiveness and Information Needs, with a coefficient of 0.882. This study adopts the concept of communication effectiveness, specifically focusing on the social media content of the Instagram account @environment, based on a survey of its followers. It applies the six dimensions of communication effectiveness proposed by Hardjana (2000), which are recipient, message content, timeliness, communication media, format, and message source.

No	Sub-Variable	Total Score	Ideal Score	Percentage (%)	Category
1	Recipient	4328	4800	90.16%	Very Effective
2	Message Content	4290	4800	89.37%	Very Effective
3	Timeliness	3834	4200	88.5%	Very Effective
4	Media	4273	4800	89.02%	Very Effective
5	Format	4273	4800	89.02%	Very Effective
6	Message Source	4284	4800	89.25%	Very Effective

Table 2. Summary Results of the Social Media Content Effectiveness Variable

Source: Research Results, 2024

The first dimension is the recipient, which refers to the engagement of the followers of the Instagram account @environment. The research results indicate that respondents exhibit a high level of engagement, with a score of 90.16%, classified as very effective. This effectiveness encompasses the account's ability to capture attention, raise awareness, and maintain followers' interest in environmental issues. The high level of engagement reflects that the audience not only receives information but also feels connected to the content, enabling climate change messages to be effectively received and well understood by the audience. Next, in the dimension of message content, a score of 89.37% indicates that the content uploaded by the Instagram account @environment regarding climate change is considered easy to understand and well-received by the audience. This reflects the account's effectiveness in delivering relevant and informative messages, enabling the information to be absorbed optimally by the audience. Thus, the content not only enhances understanding but also provides tangible benefits for the audience by increasing their awareness of climate change issues.

In the dimension of timeliness, a score of 88.5% indicates that the content of the Instagram account @environment is considered consistent in providing up-to-date information on climate change. This consistency in delivering timely content plays a crucial role in maintaining relevance and enhancing audience trust in the account. By regularly updating information, the audience feels more connected and gains direct benefits from the presented content. This reflects the account's effectiveness in fulfilling the relevant information needs of its followers. In the dimension of communication media, a score of

89.02% indicates that the Instagram account @environment is perceived as a highly effective platform for delivering information about climate change. However, some respondents noted that social media platforms like Instagram have limitations in conveying more complex topics. This suggests that while the media is effective, there is still room for improvement in how information is presented to address deeper and more detailed aspects of communication.

The format dimension emphasizes the importance of visual presentation in capturing the audience's attention. A score of 89.02% indicates that the majority of respondents consider the visual design of the content, whether images or videos, to be highly engaging. Attractive visuals play a crucial role in maintaining followers' attention and interest in the information presented, thereby enhancing the effectiveness of message delivery through the Instagram account @environment. Finally, the message source dimension evaluates the audience's trust in the information provided. A score of 89.25% indicates that the majority of respondents find the content shared by the Instagram account @environment to be trustworthy. This high level of trust is a key factor in strengthening the credibility of the information, which enhancing the effectiveness of message delivery related to climate change to the audience.

No	Sub-Variable	Total Score	Ideal Score	Percentage (%)	Category
1	Cognitive Needs	4251	4800	88.56%	Very Effective
2	Affective Needs	1416	1600	88.5%	Very Effective
3	Integrative Needs	2723	3200	85.09%	Very Effective
4	Tension Release Needs	1367	1600	85.43%	Very Effective
5	Personal Integrative Needs	4244	4800	88.41%	Very Effective

Table 3. Summary Results of the Information Fulfillment Variable

Source: Research Results, 2024

In addition, this study adopts the concept of information fulfillment. It utilizes five dimensions of communication effectiveness from Effendy (2003), which include cognitive needs, affective needs, social integrative needs, tension release needs, and personal integrative needs. In the cognitive needs dimension, the research results show a score of 88.56%, which is classified as very effective. This indicates that the majority of respondents find the information shared by the Instagram account @environment useful. This conclusion aligns with the indicators of the cognitive needs dimension, which emphasize that the climate change information presented by the @environment Instagram account provides tangible and relevant benefits to its audience.

The affective needs dimension highlights how respondents perceive the content of the Instagram account @environment as not only informative but also capable of providing entertainment and evoking positive emotions. A score of 88.5%, rated as very effective,

reflects the success of this content in fulfilling the audience's affective needs. This includes offering comfort, entertainment, and emotional relevance that fosters their engagement with the environmental issues presented. The integrative needs dimension reflects how respondents perceive the ability of the Instagram account @environment's content to foster social engagement and interaction among its followers. With a score of 85.09%, assessed as very effective, this indicates that the content successfully facilitates social interaction, discussions, and the strengthening of social connections related to environmental issues. Those account followers feel that the content not only provides information but also encourages them to share knowledge, engage in discussions, and strengthen bonds with family, friends, or communities regarding climate change and sustainability. This study employed hypothesis testing using simple linear regression analysis to examine the influence of social media content effectiveness on information needs fulfillment. The results indicate that the effectiveness of the Instagram account @environment's content has a significant impact on fulfilling its followers' information needs.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.698	.845		4.378	<.001
	X	.516	.014	.882	37.363	<.001

a. Dependent Variable: Y

Figure 2. Results of Simple Linear Regression Test
Source: SPSS 25, Processed by the Researcher, 2024

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.882 ^a	.778	.778	2.128

a. Predictors: (Constant), X

b. Dependent Variable: Y

Figure 3. Model Summary
Source: SPSS 25, Processed by the Researcher, 2024

This is evident from the regression coefficient value of 0.516, which suggests that every 1-unit increase in content effectiveness leads to a 0.516-unit increase in the fulfillment of information needs on figures 2. The influence of the content effectiveness of the Instagram account @environment on fulfilling followers' information needs is 77.8%. The remaining 22.2% is attributed to other variables not examined in this study on figures 3. These findings are strengthened by previous studies. Research by Puspita and Samatan (2022) on the Instagram account @detik.com demonstrated that the account is highly effective in fulfilling its followers' information needs, showing a strong correlation between social media use and information satisfaction. Similarly, Arifin (2015) found that the Instagram account

@filmnasional exhibited a high level of effectiveness in influencing its followers' information needs, resulting in significant satisfaction. Additionally, Pratiwi (2022) revealed that the Instagram account @univmercubuana effectively met the information needs of its followers, particularly the university students. These findings align with the results of this study, highlighting the consistency between social media content effectiveness and the fulfillment of information needs.

CONCLUSION

The results of this study reveal that the social media content of the Instagram account @environment is highly effective in fulfilling its followers' information needs in Indonesia regarding climate change issues. This effectiveness is reflected in six main dimensions examined: recipient, message content, timeliness, media, format, and message source. The recipient dimension highlights high audience engagement, as evidenced by followers' frequent access to and interaction with the content. The message content dimension indicates that the information provided is clear, relevant, and beneficial, while the timeliness dimension underscores the consistency of regularly updated posts. The account effectively utilizes features such as Feeds and Reels, supported by visually appealing formats and credible message sources. The fulfillment of the audience's information needs is also achieved, ranging from dominant cognitive needs to affective, social integrative, tension release, and personal integrative needs. These dimensions collectively highlight the account's role in increasing awareness and understanding of climate change.

This study contributes to understanding the role of social media in the delivery of information related to environmental issues. The findings show a significant relationship between content effectiveness and the fulfillment of information needs. These results underscore the relevance of social media as a reliable communication medium to convey educational and inspirational messages to a broader audience. This study is expected as a reference for future research, particularly those that examine the effectiveness of other social media platforms or use different methodological approaches to expand perspectives on environmental communication.

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