

Communication Strategy Based on Interactive Games in Climate Change Education by Predikt Tangguh Indonesia

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Received : November 11, 2025

Accepted : December 15, 2025

Published : January 30, 2026

Citation: Oetomo, A, L., & Priatna, W, B. (2026). Communication Strategy Based on Interactive Games in Climate Change Education by Predikt Tangguh Indonesia. *Communica : Journal of Communication*, 4(1), 12-21.

<https://doi.org/10.61978/communica.v4i1>

ABSTRACT: This study analyzes PT Predikt Tangguh Indonesia's communication strategy for climate change education, focusing on the innovative integration of the GenerAksi board game and Instagram-based edutainment media. By employing interactive and participatory two-way communication, these approaches enhance audiences' understanding, engagement, and motivation toward climate action. GenerAksi promotes collaborative experiential learning, enabling participants to explore climate risks and solutions in relatable real-life scenarios. Meanwhile, Instagram expands outreach and stimulates continuous involvement in climate discussions. Unlike dominant climate education approaches that remain one-way and school-centered, this study highlights the novelty of combining offline and digital interactive platforms as a unified community-oriented communication method. The findings provide insight into how innovative communication strategies can strengthen public awareness and meaningful participation in climate change education in Indonesia.

Keywords: Climate Communication, Community Engagement, Social Media Strategy, Two-way Communication, GenerAksi Game.



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INTRODUCTION

Indonesia is among the most climate- and disaster-vulnerable countries, with communities frequently exposed to earthquakes, floods, landslides, and sea-level rise. This condition presents an urgent need to enhance public understanding of climate risks and preparedness, particularly in highly populated areas such as Jakarta. However, while national policies have emphasized disaster management, climate change communication has not been fully addressed in everyday education (Oktari et al., 2022). Communication plays a crucial role in building trust, fostering participation, and motivating society to take climate-related action. Yet, traditional communication methods lectures, printed modules, and one-way information delivery often fail to engage diverse communities, limiting their effectiveness (Schäfer, 2015; Schäfer & Schlichting, 2014). Meanwhile, schools and youth represent a group with high potential to become climate advocates, but they require approaches that are enjoyable, relatable, and socially relevant. Recent studies show that

interactive media and social networks significantly influence climate-related perceptions and participation, especially among younger audiences (Anderson, 2017). Social media platforms such as Instagram can facilitate two-way engagement, allowing audiences to respond, ask questions, and share content.

This aligns with the need for climate communication strategies that are dialogical rather than merely informational. PT Predikt Tangguh Indonesia (PREDIKT), a social enterprise in climate education and disaster resilience, has adopted a participatory communication approach to strengthen climate awareness. One of its key initiatives is GenerAksi, a board game designed to simulate climate scenarios and decision-making challenges in a fun, collaborative, and context-based manner. The initiative is further expanded through Instagram-based edutainment content to reach broader audiences and sustain engagement beyond physical sessions. This study focuses on analyzing PREDIKT's integrated strategies in delivering climate education through interactive board games and social media engagement. Guided by the Two-Way Communication Theory, this research explores how these strategies foster collaboration, understanding, and behavioral intention toward climate action. The study contributes to climate communication research by filling a gap in the exploration of board games as a medium for climate communication and by presenting an empirical case of hybrid online-offline engagement in Indonesia. The organization actively integrates entertainment or 'fun' into its approaches, such as appealing and interactive Instagram content and online educational posts, to communicate key messages about disaster resiliency and climate action in engaging and accessible ways for all to consume. Social media engagement promotes two-way communication, which is crucial for effective climate change advocacy (Boulianne, 2015). Analyzing social media engagement can inform two-way communication strategies for climate change discussions (Williams et al., 2013).

GenerAksi, a key initiative of PREDIKT, is a board game developed in collaboration with the Sekretariat Nasional Satuan Pendidikan Aman Bencana (SEKNAS SPAB). This partnership supports the creation of an easy-to-understand, child-friendly, and disability-inclusive board game designed to educate about climate change in a fun and participatory way. The game is designed to simulate real-life climate change scenarios and challenges, encouraging players to make decisions that promote disaster preparedness and climate action. It aligns with Indonesia's national education curriculum. The implementation is further supported through Training of Trainers (ToT) programs, in which regional education units and teachers learn directly how to use the GenerAksi board game as a tool for teaching climate awareness and adaptive behaviour in schools.

This study aims to identify PREDIKT's communication strategies in delivering climate change education through the GenerAksi board game, analyze how the integration of social media edutainment and interactive learning contributes to engagement and awareness, and assess how these approaches support broader climate education initiatives in Indonesia. Two-way communication via social media plays a key role in tailoring climate change strategies to diverse audience segments (Leiserowitz et al., 2013). Effective communication strategies for climate change must incorporate two-way dialogue to build public trust and engagement (Corner & Clarke, 2017). Communication strategies seek to influence public opinion and alter individuals' attitudes and behaviors (Seyitoglu & Yuzbasioglu, 2015). Communication strategies serve as a means to

influence behavior, necessitating careful planning to attain the goals of the strategy successfully (Pratiwi SR et al., 2018). This study draws upon the Two-Way Communication Theory, which emphasizes the reciprocal interaction and feedback between communicators and their audiences. Effective communication enhances motivation and dedication, leading to increased productivity and improved work quality. Communication strategies that use social media for targeted two-way engagement can mobilize audiences on climate change (Maibach et al., 2011). Effective communication strategies for climate change should utilize social media to facilitate two-way communication and mitigate fear-based narratives (O'Neill & Nicholson-Cole, 2009). In this context, both the GenerAksi board game and Instagram serve as dialogic platforms that enable participatory communication, allowing users not only to receive messages but also to respond and engage actively. Communication strategies that integrate social media for two-way engagement address climate change challenges effectively (Moser, 2010). Language in communication strategies, enhanced by social media, supports two-way dialogue on climate change (Nerlich et al., 2010). This theoretical foundation helps explain how interactive and edutainment-based communication strategies can strengthen climate change awareness and behaviour change. Two-way communication plays a crucial role in delivering messages effectively. It enables more precise and more accurate exchanges, as the recipient has the opportunity to provide immediate feedback (Novianita & Pratiwi, 2020). Two-Way Communication Theory is particularly relevant in this study as it guides the analysis of how PREDIKT's communication strategies foster engagement and understanding. Two-way communication strategies on social media can boost efficacy beliefs and engagement in climate change actions (Hart & Feldman, 2016).

METHOD

Research Type

This study employed a qualitative descriptive approach to explore the communication strategies used by PT Predikt Tangguh Indonesia in delivering climate change education through the GenerAksi interactive board game. The qualitative approach was chosen because it enables a deeper understanding of communication practices, implementation processes, and the perspectives of various stakeholders involved in educational activities (Sugiyono, 2017). The study aims to investigate how interactive and participatory media, such as board games, can facilitate two-way communication and enhance community engagement in climate awareness.

Population and Sample/Informants

This research utilized both primary and secondary data sources. Primary data were collected through the researcher's direct involvement during an internship at PT Predikt Tangguh Indonesia. The primary researcher participated in the implementation of educational programs, documented activities, observed interactive learning sessions, and identified communication patterns between facilitators and participants. In-depth interviews were conducted with key informants from PT Predikt Tangguh Indonesia, including the Project Officer, teachers, educators, and government

officials who were responsible for the on-site implementation and who took part in the organized programs. Secondary data were obtained from reports, discussion summaries, and documentation produced by PREDIKT's implementation teams, including reflections and feedback from local educators involved in program delivery.

Research Location

The study was conducted at PT Predikt Tangguh Indonesia, headquartered in Jakarta, Indonesia. Field data were collected through observations of educational activities conducted in several regions where GenerAksi was implemented. Additionally, Instagram was a platform used to share documentation of implementations, educate users about climate change-related topics, and post other relevant content.

Instrumentation or Tools

A semi-structured interview guide was developed to explore participants' experiences and perceptions of using interactive games in climate change education. Observation sheets were used during the board game sessions to record participants' engagement and communication patterns. Additionally, content analysis was conducted on PT Predikt Tangguh Indonesia's Instagram posts to examine how digital media was utilized for educational outreach and awareness.

Data Collection Procedures

Data were collected through purposive sampling, involving facilitators and participants of PT Predikt Tangguh Indonesia's board game activities. Interviews and observations were conducted after each session, while digital data were gathered from the organization's social media content published during the same implementation period. These combined sources provided a comprehensive view of how interactive and digital strategies support climate change communication.

Data Analysis

Qualitative data were transcribed and analyzed thematically. Social media content was also analyzed to identify recurring themes related to environmental awareness, educational messaging, and audience engagement. Combining both field and digital data provided a deeper understanding of the communication strategies used in climate change education.

RESULT AND DISCUSSION

Analysis revealed three main themes derived from interviews, field observations, and implementation feedback on GenerAksi and PREDIKT's digital initiatives.

1. Initial Learning Barriers

At first, several teachers and students perceived the GenerAksi game as complex, requiring guidance to understand its rules and objectives. One facilitator stated, “Awalnya mereka bingung memahami game nya dan aturan mainnya, tapi setelah beberapa ronde, semuanya mulai ikut aktif.”

After facilitation, participants reported that the game became enjoyable and suitable to integrate into classroom activities.

2. Education Value and Engagement

Participants found that the board game provided a practical and enjoyable way to explore climate change topics through interactive and engaging activities. The game encouraged collaboration, role-taking, and constructive debate within groups. This experiential learning process increased involvement and strengthened comprehension of climate-related issues.

3. Motivation and Awareness

Despite initial challenges, teachers and facilitators showed strong motivation to learn and use the tool. They expressed greater awareness of the urgency of climate change and acknowledged the importance of teaching adaptive behavior to students (Pearce et al., 2014).

The findings indicate that PREDIKT's communication strategy, which utilizes the GenerAksi board game and social media, reflects the principles of Two-Way Communication Theory. The communication approach emphasizes dialogue, feedback, and active audience participation. Two-way communication not only improves information transfer but also ensures that messages are delivered in a relevant and meaningful context. When communication is executed effectively, it enables mutual understanding and collaboration, supporting better learning performance (Anggriawan & Negara, 2017). In this context, teachers and students are encouraged to take active roles by asking questions, giving input, and sharing reflections. Such involvement leads to more participatory learning and collaborative interactions rather than passive information reception (Fatkhulloh & Mardiyah, 2023). Social media strengthens this dynamic by serving as a dialogic platform where users can respond and reinterpret climate-related messages through engaging content (Varrani & Nones, 2018).

The findings indicate that PREDIKT's communication strategy, which utilizes the GenerAksi board game and social media, largely reflects the principles of Two-Way Communication Theory. This communication approach prioritizes dialogue, feedback, and active audience participation. Two-way communication not only improves information delivery but also ensures that messages are interpreted within the audience's context. When communication functions effectively, it promotes mutual understanding, collaboration, and performance improvement. Within the learning process, teachers and students are encouraged to take active roles by asking questions, offering input, and sharing reflections. This approach supports more participatory and

collaborative interactions than passive information transfer. Social media strengthens this dynamic by serving as a dialogic platform where users can respond, react, and reinterpret climate-related messages through engaging and interactive content. Meanwhile, the use of board games helps facilitate the active involvement of students in educational experiences through immediate feedback and creative participation (Azizah & Jemain, 2023). Learning media such as GenerAksi can also cater to different learning styles visual, auditory, and kinesthetic ensuring a more inclusive learning environment. Rather than merely receiving information, students interact with both instructors and the material, which encourages critical thinking and motivates learners to take active roles in understanding climate issues (Harsiwi & Arini, 2020). Effective two-way communication further minimizes misunderstandings and communication barriers, enabling clearer message interpretation between educators and students (Pusitaningtyas, 2016). Additionally, shared trust between communicators fosters a supportive environment that encourages users to express opinions comfortably, enhance creativity, and strengthen learning outcomes (Kusuma, 2021).

Theoretical Contribution

This study contributes to communication science by proposing a model that integrates experiential learning (board games) and digital engagement (Instagram) within a Two-Way Communication framework. The model demonstrates how learning media can serve not only as information delivery tools but also as dialogic channels that foster participation, collaboration, and contextual message interpretation in climate education.

Empirical Contribution

Empirically, this research provides evidence from an Indonesian social enterprise that combines board games and social media to strengthen climate change communication. The findings show that this approach increases student participation, facilitates message comprehension, and supports interactive knowledge-building. Thus, this model can be adapted in other environmental education programs and community-based communication strategies.

Interpretation of Key Findings

This study acknowledges several limitations. First, not all participants fully comprehended the game instructions without assistance, highlighting a need for more straightforward guidelines and more thorough trainer support. While the concept of communication strategy encompasses a wide range of meanings, its primary objective remains consistent: to ensure that the information shared is effectively received and clearly understood by the intended audience (Yuliana & Nurhuda, 2023). Second, most feedback originated from schools that volunteered, which may bias results toward more motivated respondents. Third, social media engagement data were limited to Instagram analytics, excluding other platforms that could display different audience behaviors.

CONCLUSION

This study examined PREDIKT Tangguh Indonesia's communication strategy in delivering climate change education through the GenerAksi board game and Instagram-based edutainment content. The findings reveal that the combination of offline interactive games and online social media engagement fosters two-way communication that improves climate knowledge, participation, and student motivation.

Theoretically, this research contributes to the field of climate communication by demonstrating a model that integrates experiential learning and digital engagement within the Two-Way Communication framework. The results strengthen the argument that learning media can act as dialogic platforms to promote audience involvement and contextual understanding of climate-related messages.

Practically, the implementation of GenerAksi and Instagram offers insights for NGOs, schools, and government institutions in designing climate education activities that are more engaging, inclusive, and relevant to the daily lives of learners. This strategy can serve as a reference for community-based climate programs in Indonesia and beyond.

Despite its strengths, this study acknowledges limitations related to participant comprehension, sampling, and reliance on single-platform analytics. Future research should include broader audiences, longer-term impact measurements, and comparative studies across multiple digital platforms to deepen understanding of climate learning outcomes (Avia, 2020).

Overall, the integration of GenerAksi and social media demonstrates how multimodal communication can strengthen climate literacy. Offline activities build foundational knowledge and skills, while online platforms sustain attention and encourage continued participation. The combination fosters a communication ecosystem where learning is ongoing, participatory, and adaptive. This approach not only supports climate education goals but also promotes community empowerment by providing individuals with the tools and spaces to engage actively with climate issues.

By leveraging both in-person interactions and digital touch points, PT Predikt Tangguh Indonesia illustrates how hybrid strategies can create a more inclusive and resilient model of climate change education, one that is responsive to local needs and capable of reaching diverse audiences across Indonesia (Hamdan, 2020; Muhtar et al., 2023).

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