

## Empowering Coastal Voices: AI-Powered Podcasting for Inclusive Communication in Kepulauan Seribu

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### ABSTRACT

This study examines the role of artificial intelligence (AI)-based communication in supporting inclusive communication through podcast media in the coastal communities of the Thousand Islands (Kepulauan Seribu), an archipelagic region administratively part of the Jakarta Special Capital Region (DKI Jakarta). Due to its geographical characteristics and scattered small islands, the region faces challenges such as limited access to information, inadequate technological infrastructure, and low participation in national digital communication flows. In this context, podcasts offer a cost-effective and accessible communication medium that enables coastal communities to share their voices, experiences, and local issues.

Radio Kepulauan Seribu (RKS), a community radio station, plays an important role as an information bridge for island residents. However, the station faces constraints in human resources and technical capacity for sustainable digital content production. The adoption of AI technologies, including text-to-speech, speech-to-text, and Natural Language Processing (NLP), helps address these limitations by supporting script preparation, language translation, and audio production.

Using a qualitative descriptive approach, this study involved community radio broadcasters, educators, and community members engaged in digital audio production and consumption. The findings show that AI-supported podcasting simplifies content production, diversifies communication formats, and expands distribution across platforms such as Spotify, YouTube, Instagram, and WhatsApp, enabling coastal communities to communicate their local interests more effectively.

**Keywords:** Podcast; Artificial Intelligence; Inclusive Communication; Coastal Communities; Kepulauan Seribu.

## INTRODUCTION

Empowerment is closely related to the goal of making communities self-reliant so that they do not depend on outside assistance (Adebayo & Butcher, 2023; Steiner et al., 2023). Therefore, community empowerment is very important as a strategy to ensure that community members benefit from their surroundings (Broadley & Dixon, 2022). In various countries, community empowerment is carried out through needs analysis to the implementation of research results with policy formulation (Dushkova & Ivlieva, 2024) (Higgins-Desbiolles et al., 2023). Community empowerment is not limited to communities in capital cities or rural areas. Indonesia, known for its 17,000 islands and thousands of fishing villages, is home to coastal communities (Komala et al., 2024). These communities play a vital role in maintaining the sustainability of marine resources. However, their voices are often drowned out by the noise of national development and commercial interests.

On the other hand, most coastal communities, either directly or indirectly, depend on managing fisheries resources for their livelihoods (Hamzah et al., 2024). Therefore, empowering coastal communities can encourage community participation in decision-making and oversight of marine and coastal resource management (Anand et al., 2024). The Thousand Islands are one of the archipelagic regions administratively part of Jakarta Special Capital Region, consisting of a cluster of small islands scattered across the northern of Jakarta. Amid environmental issues as the primary concern, the Thousand Islands face significant geographical challenges that limit access to information, technological infrastructure, and community involvement in national digital communication flows (Gisevius et al., 2024). Empowering coastal communities is inseparable from the interaction between communities and the government in managing social, economic, and environmental resources (Fadli & Nurlukman, 2018). Therefore, the role of communication in empowerment is crucial.

Communication is the process of sharing meaning through verbal and non-verbal behaviour. Schramm (1954) explained one model of circular communication. This communication model describes communication as a dynamic process. Meanwhile, Rogers and Kincaid (1980) explain a communication model based on the principle of centrality, developed from information theory and cybernetics. Thus, this model emerged after identifying various weaknesses in the one-way communication model that had dominated previous communication research. Regarding this, coastal communities face challenges with participatory communication. This is because their voices often get lost amid the noise of national development and commercial interests. Therefore, empowering coastal voices is key to ensuring that their aspirations, needs, and local knowledge are heard and integrated into policy-making. However, to develop communication skills, communities also need communication media that can serve as information sources.

The Thousand Islands have a community radio station that acts as the primary link between island residents and a provider of local information. This is because radio, as a

communication tool, facilitates centralised communication processes. Radio is a tool used by its listeners to interpret and understand the information they receive as effectively as possible. However, communication challenges in the digital age are inevitable. Therefore, RKS must adapt to digital technology. Given the Thousand Islands' unique culture and distinctive communication challenges, inclusive communication is necessary. Inclusive communication is the process of conveying information that ensures all individuals, regardless of their background, abilities, or circumstances, can access, understand, and participate in the communication. Therefore, this study aims to analyse the empowerment of coastal voices carried out by RKS radio in conducting inclusive communication through artificial intelligence-based podcasts.

#### METHODOLOGY

This research cannot be separated from the use of a qualitative approach (Creswell, 2014). The qualitative approach was used to explore artificial intelligence (AI)-based communication to support inclusive communication through podcast media in the coastal areas of the Thousand Islands. The research design employs a case study method.

This aligns with the research objective of exploring cases related to empowering coastal voices through data collection involving diverse information sources. The research location is at RKS Radio in the Thousand Islands, Jakarta. The research activities were conducted from January to June 2025. The research subjects were selected based on the criteria of setting, actors, events, and processes (Miles et al., 2013). Thus, the informants in this study were five residents with backgrounds as members of coastal communities, two community radio broadcasters, educators, and three community members actively involved in the production or consumption of digital audio content. Data collection techniques included in-depth interviews, observation, and triangulation. In-depth interviews were conducted with informants to explore their experiences with RKS radio. Data analysis was performed using the Miles et al. (2013) model, which involves data reduction, data presentation, and drawing conclusions.

#### Inclusive Communication through the RKS Podcast

Inclusive communication emphasises the use of neutral, sensitive, and non-discriminatory language, as well as taking into account diversity such as gender, culture, disability, and orientation. The goal is to ensure that everyone feels valued and heard (Nuridin, 2023). RKS, as a radio station located in the heart of a coastal community, strives to empower the community through the dissemination of information and education. RKS is a local radio station operating in the Administrative District of the Thousand Islands, Jakarta Special Capital Region, Indonesia. This radio station is under the auspices of the Thousand Islands Communication, Information, and Statistics Agency and serves as a means of disseminating local government information, particularly to support inclusive communication for the Thousand Islands community. Its main studio is located on Pramuka Island, which is the administrative centre of the regency.

RKS has adapted by using podcasts as a broadcasting medium. As a result, RKS broadcasts can reach all segments of society, including millennials and Generation Z. Generally, the public is familiar with podcasts as audio-based content. However, RKS uses audio and video content formats designed to be listened to and watched on-demand.



Figure 1. RKS radio podcast

Figure 1 shows the results of the researcher's observations. RKS adapted by launching a radio podcast that listeners can also access via YouTube. In addition, out of a total of 285 subscribers, the number of views of the video in Figure 1 reached 453. This shows that the podcast attracted listeners.

Table 1. Informants' responses regarding the RKS Radio Podcast

No	Informant	Statements
1	Rido (30 years old, member the coastal community)	"One of the RKS radio teams introduced us to this radio podcast. It turns out that the content is quite good, not just news. There is also information related to health and religion." (30 May, 2025)
2	Anne (28 years old, housewife)	"I like listening to RKS when I am taking care of my children. Now RKS is also on YouTube. There are also Islamic study podcasts and a variety of other content." (10 June, 2025)

Table 1 shows that RKS radio podcasts provide convenience for listeners. In addition, the content presented is not limited to news but also includes other information, religious studies, and health-related topics. Podcasts, as a new medium, are part of the impact of the emergence of digital technology networks and information and communication. Therefore, modern technologies such as podcasts have digital, interactive, and network-based characteristics. RKS radio broadcasters also provide explanations regarding the use of radio podcasts so that they can be accessed by the public regardless of distance and time.

The presence of radio podcasts developed by RKS provides an overview of mass communication, where the characteristics of new media are inseparable from digitalisation. This concept of new media serves as a tool for approaching communication through inclusivity (Anindhita et al., 2022). RKS, as a radio broadcast, strives to approach communication by involving all individuals. Therefore, RKS has developed radio podcasts. As a result, various segments of society, regardless of background, can listen to RKS radio.

RKS radio also demonstrates the principle of inclusive communication in its podcast content. This is evident in the podcast content, which avoids stereotypical and derogatory language. Additionally, it acknowledges and respects identities such as ethnicity and culture. RKS radio broadcasters explain that the use of inclusive communication is implemented because the podcasts developed are not limited to the Thousand Islands community but have a broader reach. Thus, communication is accessible to all, including the provision of alternative text for images (Lewil Diedong & Dzisah, 2023). Therefore, during the podcast process, broadcasters and sources avoid bias by steering clear of language containing implicit bias, such as assumptions about certain professions.

#### The Challenges of RKS Podcasts in the Digital Age

The use of podcasts on RKS radio also presents various challenges. Considering that McQuail (2000) argues that the most important characteristic of new media is connectivity. However, this study provides an overview that the content of messages conveyed through podcasts must also be of high quality. The emergence of new media is not merely about using the internet and disseminating messages through podcasts to be recognised as adaptable (Tham et al., 2024). RKS Radio strives to provide information that aligns with societal conditions. This is because the growth of new media is also driven by the popularity of podcasts among the public. Unfortunately, RKS, as a small-scale radio station in the Thousand Islands, faces human resource constraints that are insufficient to provide quality information. RKS radio broadcasters state that with only two radio broadcasters and two team members responsible for content creation, this impacts the podcast broadcast schedule. As a result, the podcasts aired have a long gap before the next content is released. This situation is due to insufficient human resources.

## CONCLUSIONS

This study concludes that RKS radio has developed podcast communication technology that can facilitate inclusive communication as a strategy for empowering coastal communities. Coastal communities also have the right to access the same information as other regions. Communication technology in this era has brought about new phenomena that can change the way humans communicate, particularly in the Thousand Islands. This research implies that inclusive communication conducted by radio through podcasts can change the way we access, consume, and interact with existing information. The challenges faced by RKS Radio can also be addressed by applying AI in podcasting activities, which not only simplifies content production technically but also expands the broadcast reach to various digital platforms such as Spotify, YouTube, Instagram, and WhatsApp. With AI, production processes can be completed more quickly, content becomes more diverse, and local messages can be conveyed in a more engaging style, even when produced by a small team. Thus, this communication model reflects a contextual and adaptive strategy in response to digital technology advancements, while empowering coastal communities to become key actors in independently voicing their local interests and identities.

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