



## PRACTICE-LED IP DEVELOPMENT FOR VISUAL NARRATIVE EDUCATION: THE SUKAWALI VILLAGE MANGROVE MASCOT

Sella Putri Arby<sup>1</sup>  
Yohanes Merci Widiastomo<sup>2</sup>  
Cheryl Claire<sup>3</sup>

Received Mar. 02, 2026; Revised June. 09, 2026, Accepted June. 15, 2026.

**Abstract:** *This study documents the practice-led development of “Mangu,” a locally designed intellectual property (IP) representing a mangrove seedling, and its accompanying children’s storybook “Si Kecil Mangu” (Little Mangu), created as an educational visual narrative for children aged 6–7 years in Sukawali Village, Pakuhaji District, Tangerang Regency. Sukawali Village faces significant environmental and social challenges, including coastal abrasion, mangrove destruction, and limited access to educational media for children. Through collaboration with the Kampung Bahari Nusantara (KBN) community and Rumah Pintar volunteers, this research employs a qualitative and practice-led research approach to document the full IP creation process — from character design and social media audience testing to the production of a finalized storybook grounded in Dual Coding Theory, Visual Literacy Theory, and Narrative Transportation Theory. The findings demonstrate that theory-informed visual narrative design produces educational media that is both locally grounded and academically rigorous. Beyond its immediate educational function, “Mangu” offers a replicable model for how mascot-based IP can be developed through participatory, practice-led processes to support community-based environmental education in coastal conservation contexts.*

**Keywords:** *community education; environmental literacy; intellectual property; mangrove conservation; visual storytelling*

### Introduction

Sukawali Village, Pakuhaji District, is one of the villages located on the northern

coast of Java Island that is striving to enhance the resource potential of mangrove plants. Residents living around the village do not yet fully understand the benefits of

<sup>1</sup>Sella Putri Arby is a lecturer at Politeknik Multimedia Nusantara (MNP), Tangerang.

e-mail: [sella.putri@mnp.ac.id](mailto:sella.putri@mnp.ac.id)

<sup>2</sup>Yohanes Merci Widiastomo is a lecturer at Universitas Multimedia Nusantara (UMN), Tangerang.

e-mail: [yohanes.merci@umn.ac.id](mailto:yohanes.merci@umn.ac.id)

<sup>3</sup>Cheryl Claire is a staff at Politeknik Multimedia Nusantara (MNP), Tangerang.

email: [cheryl.claire@mnp.ac.id](mailto:cheryl.claire@mnp.ac.id)

the existence of the mangrove forest. Many parties are focusing attention on conducting conservation of mangrove forests in this area (Sulaiman et al., 2023). The local government, in cooperation with the Indonesian Navy and the local community, Kampung Bahari Nusantara (KBN), is implementing a program to assist in cultivating mangrove plants in the coastal area (Pengadilan Negeri Cilacap, 2023). At the end of 2024, the researchers carried out Community Service activities in the area (mnpadmin, 2025). Several problems faced by the KBN at KSS Beach were mapped, such as the large amount of trash, the community's lack of understanding of mangrove plants, and the rough coastal waves that make it difficult for mangrove plants to grow in the area. The educational profile of the Sukawali Village community is predominantly composed of elementary and junior high school graduates, with limited access to environmental education media tailored for children.

Efforts to address these challenges have been led by the KBN community in collaboration with the local government and the Indonesian Navy, focusing primarily on mangrove planting and coastal rehabilitation. At the end of 2024, the researchers conducted Community Service (Pengabdian kepada Masyarakat) activities in the area, identifying key obstacles including low public awareness, limited literacy resources, and the absence of child-friendly educational media that communicates the importance of mangrove conservation in a culturally grounded and accessible way. While conservation programs have made physical progress, the lack of narrative-based educational tools means that long-term behavioral change — particularly among the youngest residents — remains difficult to sustain.

The presence of the character “Mangu” as an Intellectual Property (IP) developed by the Animation Study Program at MNP serves as a local mascot that can strength-

en the identity of Sukawali Village as an educational and mangrove tourism area. The “Mangu” IP, developed in the form of a storybook and short animations, opens opportunities for cross-disciplinary collaboration between higher education institutions and local communities. This activity represents a tangible contribution of educational institutions in fulfilling their social and environmental roles through creative, relevant, and community-impactful approaches (Suprpto et al., 2021). By leveraging local potential and developing educational content based on local culture and the surrounding environment, this program has the potential to enhance literacy, broaden perspectives, and gradually improve the quality of life of the village community (Lustyantie et al., 2019).

The development of a storybook is one of the key elements of this literacy program, as storybooks play a strategic role in instilling moral, social, and environmental values through an approach that is enjoyable and easily understood by children (Aji et al., 2025). Through stories that are closely related to their daily lives, children can more easily understand the importance of protecting mangrove forests and coastal ecosystems in general (Sunkur et al., 2023).

The storybook can be used by volunteers as teaching material, by parents as bedtime reading, and by children for independent reading or shared reading with their peers. Beyond serving as a learning aid, the storybook also functions as a form of documentation of local culture and environmental heritage, particularly for children aged 6–7 years (Simionova-Ingilizova, 2023). The story “Si Kecil Mangu”, translated as Little Mangu, which is based on real issues in Sukawali Village, represents an effort to preserve local knowledge and natural heritage, presented in an engaging and accessible format.

Several prior studies have examined storytelling, folklore, and children's literature as media for environmental education in coastal communities. Anggraeni and Rafiyanti (2022) demonstrate how folktales shape early character education, while Rawanda et al. (2020) and Suwandi et al. (2025) show how place-based narratives support mangrove and ecosystem conservation. Aji et al. (2025) further confirm the strategic role of children's literature in building literacy and character. However, these studies predominantly evaluate existing or generic narrative forms rather than documenting the process of designing and developing a new, locally grounded visual narrative IP. No study to date has recorded how a mascot-based IP and an accompanying storybook are co-created with a specific coastal community, from initial character design and audience testing through to a finalized children's literacy product grounded in visual narrative theory. This study addresses that gap.

In response, this study documents the practice-led development of "Mangu," a locally designed intellectual property (IP) representing a mangrove seedling, and the accompanying storybook "Si Kecil Mangu" (Little Mangu), created as an educational visual narrative for children aged 6–7 years in Sukawali Village. The development process encompasses character design, social media audience testing among users aged 11–23, community collaboration with KBN and Rumah Pintar volunteers, and the production of a storybook grounded in Dual Coding Theory, Visual Literacy Theory, and Narrative Transportation Theory. Beyond its immediate educational function, the "Mangu" IP represents a model for how academic institutions can develop locally embedded creative media that serves both conservation and community empowerment goals.

Based on this background, the present study formulates the following research

questions: (1) how is the "Si Kecil Mangu" storybook designed and developed as an educational visual narrative IP through a practice-led research process grounded in the social and environmental context of Sukawali Village, and (2) how do the principles of Dual Coding Theory, Visual Literacy Theory, and Narrative Transportation Theory inform the visual and narrative design choices of "Si Kecil Mangu" in supporting early environmental literacy among children aged 6–7 years? By answering these questions, this study aims to offer a theory-informed, replicable model for developing community-based educational visual narrative IP in coastal conservation contexts.

## **Methodology**

This study employs two main approaches: a qualitative method (Bazen et al., 2021) and a creation-based method (practice-led research) as the foundation for the data collection process and the development of an educational storybook (Engen, 2021). The qualitative method is used to explore in depth the social, cultural, and environmental contexts and issues present in Sukawali Village. This approach involves field observations, in-depth interviews with community leaders and members of the KBN, as well as documentation of educational activities and mangrove conservation efforts.

The purpose of this qualitative approach is to obtain a comprehensive understanding of several key aspects, including the conditions of coastal environments and mangrove forests, the challenges faced by the community related to children's literacy and education, and the role of local communities in preserving ecosystems and promoting environmental awareness. The qualitative data collected serve as the primary foundation for developing the narrative, characters, and educational messages incorporated into

the storybook.

Practice-led research is an approach in which creative practice, both the process of making and the resulting artefact, functions as a principal mode of inquiry, generating knowledge that is documented, reflected upon, and articulated alongside conventional academic argument (Engen, 2021). Rather than treating the creative output solely as an illustration of pre-existing theory, practice-led research positions the act of creating as a source of new understanding in itself. In this study, the act of creating includes designing the “Mangu” character, drafting the narrative, producing illustrations, and testing the storybook with its intended audience. The knowledge generated through this process, design iterations, feedback from KBN members and Rumah Pintar volunteers, and children’s responses during pre-testing, forms part of the data analyzed and discussed in this article.

In addition to the qualitative approach, this research also applies practice-led research, which emphasizes creative practice as an integral part of the research process itself. Within the context of this study, the process of creating the storybook becomes a central component of academic exploration and reflection. The steps involved in the creation-based method include the identification of ideas and main themes based on field data from Sukawali Village; the development of the story concept and character design (Mangu); scriptwriting and illustrations based on narratives that have been validated through input from the community and experts; and the pre-testing of the book’s use at the Rumah Pintar to observe responses from children and volunteer educators. The process concludes with the registration of intellectual property rights, the finalization of the storybook, and the preparation of a scientific article.

The following section presents a flow-

chart illustrating the storybook development process.

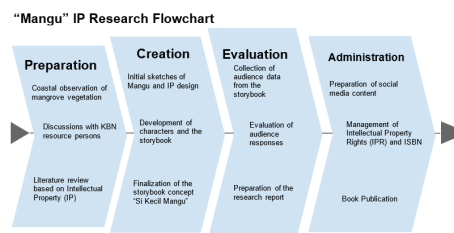


Figure 1. Mangu IP Research Flowchart (Source: Personal research documentation)

## Literature Review

According to Dual Coding Theory by Allan Pavio in 1971, information is processed through two interconnected systems: verbal and non-verbal (visual). Learning becomes more effective when both systems are activated simultaneously. In the context of early literacy, illustrated narratives allow children to associate textual elements with images, strengthening comprehension and memory retention. (Khabarova, 2025).

Visual literacy theory emphasizes the ability to interpret, negotiate, and create meaning from visual information. For early readers, visuals are not merely decorative but serve as primary carriers of meaning. Through consistent visual motifs, color symbolism, and character design, Mangu helps children interpret cause-and-effect relationships, such as the link between waste, abrasion, and mangrove degradation, without relying solely on textual explanations. This supports the development of visual literacy as a foundational component of broader literacy skills (Avgerinou & Pettersson, 2011). According to the theory, visual literacy includes multiple interrelated components such as visual perception, visual language, visual learning, visual thinking, and visual communication. The authors argue that visual literacy must be learned,

is not universal, often interacts with verbal literacy, and can enhance learning and communication. According to Avgerinou & Pettersson, visual literacy involves competencies that go beyond simply seeing images. These include the abilities to interpret, evaluate, produce, and communicate meaning using visual elements. The theory highlights that visual literacy incorporates both cognitive and communicative skills and is interconnected with other forms of literacy.

Narrative Transportation Theory, proposed by Green and Brock (2000), explains how individuals become mentally and emotionally immersed or “transported” into a story world. When narrative transportation occurs, audiences temporarily suspend disbelief, focus their attention on the story, and emotionally connect with characters and events. This immersive experience increases the persuasive power of narratives, as audiences become less likely to critically counterargue the message and more receptive to the values embedded within the story. Green and Brock (2000) argue that transported audiences are more likely to adopt beliefs consistent with the narrative.

In Albert Bandura’s Social Cognitive Theory (SCT), a mascot also serves as a role model. Essentially, education that utilizes storytelling must also be supported by positive behavioral aspects inherent in the mascot. This will eventually encourage behavioral change in students or learners (Chanakya, 2024). Therefore, designing a mascot requires several stages, such as observation, data collection, and analysis of the mascot idea’s core visual (Ernawati, 2016).

In addition to the psychological aspects of form and color, there is a crucial aspect in designing a mascot for education: anthropomorphism. This is further strengthened in discussions concerning the anthropomorphism and persona as-

pects present in an educational mascot. Anthropomorphic design can stimulate the cognitive aspects of its audience. In this context, the positive aspects embedded in the mascot are also personified through attitudes and actions similar to those of humans (Yang, 2023).

## Result

The approach employed in this study uses a storybook featuring the main character “Mangu,” a mangrove seedling that struggles to grow on its own because other mangrove trees have died due to excessive waste, coastal abrasion, and extreme weather caused by global warming. The following is the initial sketch of the character “Mangu,” which is inspired by the form of a propagule-type mangrove seedling.

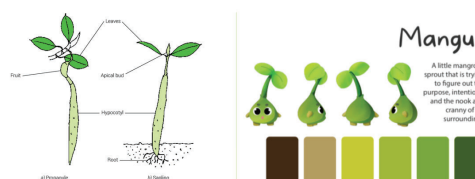


Figure 2. Mangu Early Design  
(Source: Personal research documentation)

Animation Study Program Team develops the “Mangu” intellectual property by creating content on social media platforms such as Instagram and TikTok. Efforts are made to produce content not only in Indonesian but also in English in order to reach a wider audience. Nevertheless, the content is designed with illustrations that reflect local wisdom, using KSS Beach as the main visual reference (Syarmilah et al., 2022).

Educational media on environmental conservation are predominantly delivered through formal approaches such as seminars, posters, or documentary videos, which are generally targeted at adolescents and adults. Moreover, the use of

mascots as a medium for environmental education in the form of intellectual property (IP) developed by educational institutions remains relatively uncommon, particularly those specifically designed to be integrated into literacy activities and community service programs. This storybook was developed based on direct observation and collaboration with the local community (KBN) and is designed as a relevant learning aid that integrates literacy, environmental education, and the development of local characters as part of a long-term conservation strategy. Beyond functioning as an educational tool, the book also serves as a creative product that bridges the academic community, local stakeholders, and environmental conservation through a participatory and contextual approach.

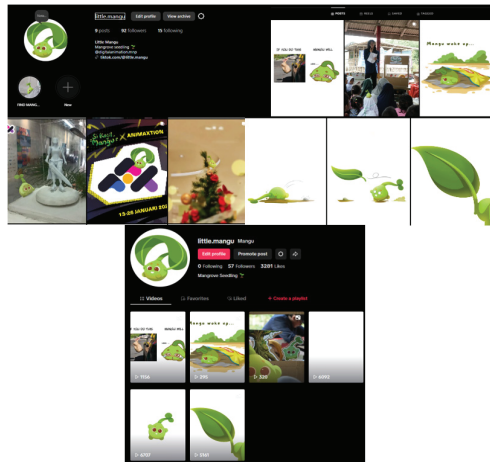


Figure 3. Mangu Instagram & TikTok  
(Source: Personal research documentation)

After several trials, “Mangu” was found to successfully capture the attention of audiences aged 11–23 years. The problem-solving approach through education using books is expected to increase awareness of the importance of mangrove forest cultivation by utilizing social media as a supporting medium. This is based on the fact that the knowledge of the Sukawa-

li Village community is largely centered on narratives related to mangrove forests (Moore et al. 2022)(Gerona-Daga et al., 2022).

The discovery of highly enthusiastic audiences engaging with “Mangu” content on social media encouraged the Animation Study Program to begin planning the development of the “Mangu” storybook. While the social media content of “Mangu” focuses on audiences aged 11–23 years, the storybook to be developed is intended for a younger audience aged 6–7 years. This age range represents a developmental stage in which children learn extensively through visual stimuli and simple reading materials (Simeonova-Ingilizova, 2023).

The practice-led research approach enables this study not only to produce a final product in the form of a book but also to generate new insights into the collaborative process between academics and communities in creating locally based educational media. The aspect of locality emphasized in the book’s development is conveyed through visual narratives (Riyanto et al., 2024). Activities conducted as part of the Tridharma specifically Community Service (or Pengabdian kepada Masyarakat, PkM), also generated data for the visual development of the storybook, based on the responses of children who participated in storytelling sessions and the “Mangu” coloring competition.



Figure 4. “Belajar dan Bermain Bersama Si Mangu”  
Activity in Rumah Pintar  
(Source: [https://www.instagram.com/p/DGN-bWrPzz9I/?img\\_index=2](https://www.instagram.com/p/DGN-bWrPzz9I/?img_index=2))

After obtaining findings from KSS Beach, Rumah Pintar, and information from KBN members, a draft of the story and preliminary sketches were developed for the storybook entitled “Si Kecil Mangu.” The next step in this process was the sketching of storyboards and the creation of key visuals to serve as the standard visual reference.

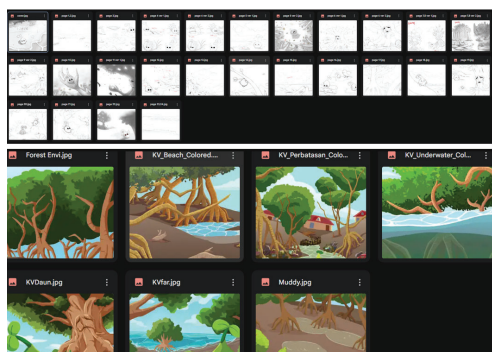


Figure 5. Sketches and Key Visual for “Si Kecil Mangu”  
(Source: Personal research documentation)

## Discussion

In “Si Kecil Mangu” storyboard, illustrations of mangrove ecosystems, environmental degradation, and the character’s emotional expressions function as visual anchors that support children’s understanding of the narrative, particularly when their reading skills are still developing. This approach aligns with Dual Coding Theory, which posits that learning is enhanced when verbal and visual information are processed simultaneously. Through this dual-channel processing, children are able to grasp complex environmental concepts—such as pollution, coastal abrasion, and ecosystem vulnerability—through imagery before fully decoding textual language.

From the perspective of Visual Literacy Theory (Avgerinou & Pettersson, 2011), visuals in children’s storybooks are not merely decorative elements but constitute a structured visual language that conveys

meaning, values, and relationships. Visual literacy emphasizes the ability to interpret, negotiate, and construct meaning from images. The visual of “Si Kecil Mangu”, consistent visual symbols, character expressions, and environmental settings guide children in interpreting cause-and-effect relationships between human behavior and environmental damage. This supports the development of visual literacy as a foundational competence that complements verbal literacy in early childhood learning.

By personifying a mangrove seedling as a struggling yet resilient character, Mangu also fosters emotional engagement, empathy, and identification. According to Narrative Transportation Theory, such emotional immersion allows audiences to become cognitively and affectively absorbed in the story world. The expressive illustrations strengthen this transportation by providing emotional cues and visual continuity, enabling young readers to visualize the narrative and connect with its messages. As children become transported into Mangu’s journey, environmental values are internalized more naturally, reducing resistance to persuasive messages and transforming literacy activities into meaningful, experience-based learning rather than didactic instruction.

Taken together, the integration of visual literacy, narrative immersion, and dual coding positions “Si Kecil Mangu” as a strategic communication medium that translates complex environmental discourse into accessible, emotionally resonant narratives. This demonstrates how visual narrative literacy can function not only as an educational tool but also as an effective form of environmental communication that fosters early awareness and pro-conservation attitudes.

Therefore, here are Theoretical Framework of Visual Narrative in the sto-

ry “Si Kecil Mangu” storybook development.

Table 1. Dual Coding Theory  
(Source: Paivio, 1986)

Key Concept	Verbal–visual dual processing
Story Application	Text and illustrations work together to explain mangrove ecosystems and environmental damage
Contribution	Helps children understand complex environmental issues before full reading fluency

Table 2. Visual Literacy Theory  
(Source: Avgerinou & Pettersson, 2011)

Key Concept	Images as meaning-making language
Story Application	Visual symbols, character expressions, and environmental settings guide interpretation
Contribution	Develops children’s ability to read and interpret visual information as part of early literacy

Table 3. Narrative Transportation Theory  
(Source: Green & Brock, 2000)

Key Concept	Emotional immersion in narratives
Story Application	Anthropomorphic character “Mangu” creates empathy and emotional engagement
Contribution	Increases receptiveness to environmental values and conservation messages

Table 4. Visual Narrative Strategy

Key Concept	Story-based communication
Story Application	Environmental issues presented through a child-friendly narrative
Contribution	Shifts environmental education from didactic instruction to experiential learning

Table 5. Place-Based Communication Approach

Key Concept	Local visual context
Story Application	Coastal imagery inspired by KSS Beach
Contribution	Strengthens place attachment and local environmental awareness

## Conclusion

This study demonstrates that the integration of qualitative methods and practice-led research provides a robust framework for developing locally grounded environmental literacy media for children. Through field observations, collaboration with the KBN community, and educational activities in Sukawali Village, the creation of the storybook “Si Kecil Mangu” functioned both as a creative output and a communication intervention. The findings indicate that environmental education for young audiences becomes more effective when delivered through narrative-driven and visually rich media that reflect local ecological conditions and lived experiences.

The use of visual narratives in “Si Kecil Mangu” supports early literacy development by enabling children from aged 6 years to understand environmental concepts through imagery prior to full textual mastery. In line with Visual Literacy Theory and Dual Coding Theory, illustrations serve as visual anchors that enhance comprehension and memory. The personification of Mangu as a resilient mangrove seedling encourages emotional engagement, allowing children to develop empathy toward environmental issues rather than perceiving them as abstract phenomena.

From the perspective of Narrative Transportation Theory, the emotional immersion created through Mangu’s story increases children’s receptiveness to conservation messages. The combination of expressive illustrations and narrative structure facilitates deeper engagement with the story world, transforming literacy activities into experiential learning processes. This emotional transportation is essential in shaping early environmental awareness and pro-environmental attitudes.

Additionally, this study underscores the significance of place-based communication in environmental education. By situating the narrative and visual elements within the specific coastal context of KSS Beach and Sukawali Village, “Si Kecil Mangu” strengthens place attachment and reinforces the relevance of mangrove conservation. The development of the “Mangu” intellectual property as a local mascot further highlights the potential of creative media to bridge academic research, community participation, and long-term environmental communication strategies.

Future research may extend this study by examining the long-term impact of storybook-based environmental literacy on children’s attitudes and behaviors toward environmental conservation. Quan-

titative or mixed-method approaches could be employed to measure changes in environmental knowledge, empathy, and pro-environmental behavior over time. Additionally, comparative studies across different regions or ecological settings could explore how place-based visual narratives influence children’s environmental understanding in diverse cultural contexts. Further research may also investigate the adaptation of the “Si Kecil Mangu” narrative into other media formats, such as interactive digital books, animations, or classroom-based learning modules, to assess their effectiveness in expanding audience reach and educational impact.

The authors would like to express their sincere gratitude to the KBN community of Sukawali Village for their collaboration, support, and valuable local knowledge throughout this research. Appreciation is also extended to the children, volunteers, and educators at Rumah Pintar for their enthusiastic participation during the literacy and storytelling activities. The authors acknowledge the support of the Animation Study Program for facilitating the development of the “Mangu” intellectual property and the implementation of this practice-led research. Special thanks are also given to colleagues and reviewers who provided constructive feedback during the research and writing process.

## References

- Aji, R. I., Unes, U., & Syamsurrijal, S. (2025). Exploring the role of children’s literature in developing literacy and character in elementary education: A qualitative study. *Journal of General Education and Humanities*, 4(4). <https://doi.org/10.58421/gehu.v4i4.743>
- Anggraeni, D., & Rafiyanti, S. (2022).

- Pengaruh Dongeng terhadap Pendidikan Karakter Anak Usia Dini. *Jurnal Pendidikan Tambusai*, 6(1), 2485–2490. <https://doi.org/10.31004/jp-tam.v6i1.3296>
- Bazen, A., Barg, F. K., & Takeshita, J. (2021). Research techniques made simple: An introduction to qualitative research. *Journal of Investigative Dermatology*, 141(2), 241–247.e1. <https://doi.org/10.1016/j.jid.2020.11.029>
- Chanakya C. N, C. (2024). Animation for social impact: Visual storytelling in health, education, and activism. *Journal of E-Science Letters*, 5(3), 1–2. <https://doi.org/10.51470/esl.2024.5.3.01>
- Efendi, A. (1970). Mengembangkan Kecerdasan Emosional Anak melalui Kebiasaan Bercerita (Dongeng). *INSANIA: Jurnal Pemikiran Alternatif Kependidikan*, 11(3), 328–336. <https://doi.org/10.24090/insania.v11i3.201>
- Engen, L. (2021). Practice-led research in the art museum. *Nordic Journal of Art and Research*, 10(2). <https://doi.org/10.7577/information.3769>
- Ernawati, E. (2016). Editorial page and table of content. *Humaniora*, 7(3). <https://doi.org/10.21512/humaniora.v7i3.3654>
- Gerona-Daga, M. E. B., & Salmo, S. G., III. (2022). A systematic review of mangrove restoration studies in Southeast Asia: Challenges and opportunities for the United Nation's Decade on Ecosystem Restoration. *Frontiers in Marine Science*, 9(7). <https://doi.org/10.3389/fmars.2022.987737>
- Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, 79(5), 701–721. <https://doi.org/10.1037/0022-3514.79.5.701>
- Hadi, A., Wahyuni, D., Safitri, N., Jannah, N. R., Rahmadin, M. G., & Febrianti, S. S. (2022). Rehabilitasi Lahan Mangrove Sebagai Strategi Mitigasi Bencana Alam di Desa Seriwe, Kecamatan Jerowaru, Nusa Tenggara Barat. *Jurnal Pengabdian Magister Pendidikan IPA*, 5(1), 45–50. <https://doi.org/10.29303/jpmpi.v5i1.1285>
- Khabarova, E. (2025, November). Dual Coding: Exploring opportunities to deliver learning content in NOW. NTU. <https://www.ntu.ac.uk/about-us/teaching/academic-development-and-quality/cadq-blogs/dual-coding-exploring-opportunities-to-deliver-learning-content-in-now>
- mnpadmin. (2025, March 4). Animasi untuk Konservasi: Kampanye Pelestarian Mangrove. Multimedia Nusantara Polytechnic. <https://mnp.ac.id/animasi-untuk-konservasi-mangrove/>
- Moore, A. C., Hierro, L., Mir, N., & Stewart, T. (2022). Mangrove cultural services and values: Current status and knowledge gaps. *People and Nature*, 4(5), 1083–1097. <https://doi.org/10.1002/pan3.10375>
- Perhutani bersama komando armada I dinas pembinaan potensi maritim TNI AL lakukan penanaman di hutan mangrove. (2022, June 2). Perhutani. <https://www.perhutani.co.id/perhutani-bersama-komando-armada-i-dinas-pembinaan-potensi-maritim-dan-stakeholder-lakukan-penanaman-5-000-pohon-tanaman-mangrove-di-tangerang-banten/>
- PN cilacap menghadiri program kegiatan kampung bahari nusantara tahun 2022. (2023). <https://www.pn-cilacap.go.id/>; Pengadilan Negeri Cilacap. <https://www.pn-cilacap.go.id/index.php/en/berita/berita-terki>

- ni/1188-pn-cilacap-menghadiri-program-kegiatan-kampung-bahari-nusantara-tahun-2022
- Rawanda, R., Winarno, G. D., Febryano, I. G., & Harianto, S. P. (2020). Peran folklore dalam mendukung pelestarian lingkungan di pulau pisang. *Journal of Tropical Marine Science*, 3(2), 74–82. <https://doi.org/10.33019/jour.trop.mar.sci.v3i2.1915>
- Riyanto, R. B., Prajanti, S. D. W., Fibrianti, N., & Karsinah, K. (2024). Optimizing expertise through commercial intellectual property achievement to support research output downstreaming: External aspects in policy reform. *Journal of Law and Legal Reform*, 5(2), 817–838. <https://doi.org/10.15294/jllr.vol5i2.6455>
- Rukmana, S. N., & Shofwan, M. (2018). FENOMENA URBANISASI: POLA PERUBAHAN MATA PENCAHARIAN BERBASIS SPASIAL. *WAKTU: Jurnal Teknik UNIPA*, 16(2), 56–60. <https://doi.org/10.36456/waktu.v16i02.1668>
- Simeonova-Ingilizova, M. (2023). The educational role of fairy tales in preschool (6-7 year old). *Педагогически Форум*, 11(2), 42–53. <https://doi.org/10.15547/pf.2023.013>
- Sulaiman, U., Wilkins, D. E., Rahmawati, R., Subair, S., Bakri, W., Suban, A., Mihrani, M., Ilham, I., Kango, A., & Obie, M. (2023). Contribution of local wisdom of the bajo tribe to preserve indonesia's mangrove forests. *Academic Journal of Interdisciplinary Studies*, 12(3), 264. <https://doi.org/10.36941/ajis-2023-0076>
- Sunkur, R., Kantamaneni, K., Bokhoree, C., & Ravan, S. (2023). Mangroves' role in supporting ecosystem-based techniques to reduce disaster risk and adapt to climate change: A review. *Journal of Sea Research*, 196(7), 102449. <https://doi.org/10.1016/j.seares.2023.102449>
- Suprpto, H. M. (2021). PENGARUH BUKU CERITA BERGAMBAR TERHADAP KEMAMPUAN MEMBACA PEMAHAMAN DAN HASIL BELAJAR SISWA. *LITERA*, 20(3), 446–463. <https://doi.org/10.21831/ltr.v20i3.40074>
- Suwandi, S., Ulya, C., Wardhani, N. E., Kurniawan, H., & Ristiyani. (2025). Human-Environmental relations as manifested in central java folklore of indonesia. *Theory and Practice in Language Studies*, 15(7), 2366–2376. <https://doi.org/10.17507/tpls.1507.29>
- Syarmilah, Carong, S. R., Makmur, & Qaizar. (2022). Kearifan lokal dalam pengelolaan ekosistem hutan mangrove: Studi kasus di gonda mangrove park kecamatan campalagian kabupaten polewali mandar. *Pangale: Journal of Forestry and Environment*, 2(1), 47–56. <https://doi.org/10.31605/pangale.v2i1.1903>
- Yang, Y., Sun, L., Han, B., & Liu, P. (2023). The trajectory of anthropomorphism and pro-environmental behavior: A serial mediation model. *International Journal of Environmental Research and Public Health*, 20(3), 2393. <https://doi.org/10.3390/ijerph20032393>