

Content Analysis of the Visual Design in a Social Media Awareness Campaign about Coral Reef Ecology in Malaysia

Muhammad Saifulnizam Razali¹, Inda Murni Hairul Anuar², *Sharkawi Che Din³
^{1,2,3}*Faculty of Art & Design, Universiti Teknologi MARA, Selangor Branch, Puncak Alam Campus, Selangor, Malaysia.*

Saifulnizam023@gmail.com¹, indamurni@uitm.edu.my², *sharkawi237@uitm.edu.my³
*Corresponding author

Received: 2 February 2026; Accepted: 30 June 2026; Published: 1 September 2026

ABSTRACT

This research study of the use of visual design elements and storytelling strategies in social media awareness campaigns about coral reef ecology within Malaysia & International Campaign video. Examining existing campaign content and identifying visual design principles and design limitations. A qualitative content analysis approach, guided by Krippendorff's framework, was applied to six selected coral reef awareness videos on social media platforms. The findings revealed that while campaigns commonly implemented marine-related colour palettes and motion graphics to enhance visual appeal, visual hierarchy, narrative, and platform diversity, message clarity and emotional engagement are needed. Most campaigns relied on specific platforms, especially on YouTube, which short-form or interactive platform that is popular among younger audiences. The use of storytelling approaches was rather informative than emotionally driven. Therefore, this study concluded that the importance of implementing structured visual design principles and storytelling frameworks into environmental awareness campaigns needed to be addressed for effective messaging.

Keywords: Awareness Campaign, Coral Reef, Conservation, Social Media, Visual Design.



ISSN: 2550-214X © 2026. Published for Ideology Journal by UiTM Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution-No Commercial-No Derivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

1 INTRODUCTION

Coral reefs are underwater ecosystems that are formed by colonies of coral polyps. These coral reefs are small, vibrant, soft-bodied organisms that create a hard skeleton (calcium carbonate). They are often referred to as the “rainforests of the sea” due to their biodiversity, which supports approximately 25% of all marine species, despite covering only about 1% of the ocean floor. Malaysia is also known for its rich marine biodiversity in regions such as Sabah and Terengganu. They bring values of between RM39.6 million and RM3.6 billion a year in fisheries, ecotourism, coastal protection, pharmaceutical potential, and aesthetic importance. However, these ecosystems are facing severe decline. According to Reef Check Malaysia's Annual Reef Report Card (2023), the continuous reef deterioration is caused by overfishing, marine debris, anchor damage, and unregulated tourism. Destruction not only affects marine structures but also severely impacts the broader ocean ecosystem, including coastal protection, fish nurseries, and primary oxygen sources.

These issues were highlighted, and awareness campaigns exist in many media, whether it's in digital or non-digital forms. Despite the usage of a medium to deliver a message, which is often conventional or static, they tend to fail to engage emotionally with audiences. In recent years, many organisations, non-governmental or governmental, have turned to digital platforms to raise awareness about marine conservation, especially coral reefs. Social media has become a dependable platform, such as Instagram, Facebook, and TikTok, which have become key for offering information, communication, and visual and interactive content to reach a larger audience for awareness campaigns by conservation. However,

many campaigns in Malaysia are too rigid and overly rely on static visuals or textual information that does not interest or engage enough to capture the audience's interest or emotional engagement. Therefore, the elements of visual design are needed for this particular campaign, such as contrast, balance, emphasis, unity, harmony, proportion, rhythm, and movement. These principles are the foundations for creating an engaging campaign that focuses on emotional and immersive storytelling for audiences.

Moreover, this research aims to investigate how social media campaigns in Malaysia and overseas deliver or communicate awareness of coral reef ecology through visual design, including plans and strategies to influence public engagement and perception. These are chances to understand how strategic planning in social media and visual design can affect audience emotional engagement, and for conservation to understand the effective ways to deliver an impactful message regarding the declining health of coral reefs. These studies can contribute to environmental communication studies, digital media, and motion design, providing data-driven insights into how awareness campaigns that focus on coral reefs deliver messages and perform on social media. Moreover, it could help designers, conservation organisations, and educators seeking data to develop more engaging awareness strategies.

1.1 Research Objective

The investigation on Malaysia's social media awareness campaigns about coral reefs often lacks in terms of visual design, limited storytelling depth, and low emotional engagement. These reduce their ability to capture public interest, especially among youth. Therefore, this research aims to analyse and explore how visual design elements and storytelling are applied in social media awareness campaigns about coral reef ecology within Malaysia and overseas. The study focuses on analysing existing campaigns and demonstrating a design solution, rather than collecting audience feedback. Next, this study will be implemented in an immersive experience awareness campaign explainer video with storytelling that engages emotions and fosters interest in coral reef preservation.

1.2 Problem Statement

Coral reefs are among the most biologically diverse ecosystems and the most vital marine ecosystems, which support nearly 25% of marine species and provide essential ecosystem services, income revenue from tourism, and coastal protection for millions of people globally (WWF). However, they come under threat from climate change, pollution, overfishing, and unsustainable human activities, which cause the Coral reefs to be under pressure and bleaching. These will threaten our marine biodiversity and coastal ecosystems. According to recent findings by Reef Check Malaysia, nearly 50% of Malaysian coral reefs are under medium to high threat due to marine debris, sedimentation, overfishing, and unsustainable human activities (Reef Check Malaysia, 2024). Besides that, the United Nations Environment Programme (UNEP) has reported on the coral reefs where more than 30% of coral reefs worldwide are severely affected and damaged, without constant conservation efforts such as restoring habitats, reducing pollution, and enhancing resilience against climate change, which are likely to disappear by 2050 (UNEP, 2023).

In 2025, the increase in digital media usage has accelerated with new platforms, new AI, and a new landscape in media applications for sending messages. Despite having many platforms appearing, the awareness of coral reef conservation among Malaysians remains low compared to what is expected. The report says that despite young people who are actively engaged with environmental topics on social media being limited in their long-term awareness and behavioural change (WWF-Malaysia, 2024). Current awareness campaigns tend to use visuals that are static or conversational or text-based messaging that lack emotional engagement and interactivity with audiences. This is the reason campaigns fail to achieve a goal due to not fully understanding that visual communication strategies, such as colour schemes, typography, imagery, and layout, can help in terms of shaping the perception, attention, and message delivery through visuals. Besides that, the usage of motion graphics, storytelling, and animation is also important in capturing the engagement from the audience and encouraging a

deeper understanding and empathy towards the coral reef. The communication gap between conservation organisations and the public is causing limitations in effectiveness in outreach efforts and reducing long-term engagement with conservation. (WWF-Malaysia, 2024).

Although there is literature on environmental conservation studies of communication and motion graphics in Malaysia, only a few academic studies that examine visual design principles are applied specifically in a social media coral reef campaign. The document National report on coral reefs usually reports on ecological needs and advocacy activities; they don't analyse the campaign design but provides content and examples for an organisation-led campaign (Reef Check Malaysia, 2024). There are local studies that examine communication strategies for coral reef conservation (messaging, stakeholder outreach). These studies are valuable background studies and examples of campaign practice, rather than focusing on visual design analysis. The lack of a local researcher on this topic presents challenges in finding and validating data-driven approach strategies to help improve environmental communication. The limited content for content analysis on social media creates more difficulty in understanding how and which visual strategies work best for Malaysian audiences.

Therefore, this research is to analyse visual design elements such as colour scheme, composition, typography, and motion graphics that were used in a social media awareness campaign focusing on coral reef ecology in Malaysia. To be specific, the studies will be on evaluating the design components' influence on message clarity, storytelling engagement, and interaction. By identifying the visual approaches that are suitable for a campaign, this research will be able to provide valuable insights for conservation organisations, educators, or future awareness campaigns to build a stronger public connection with marine conservation efforts.

2 LITERATURE REVIEW

This literature review explores the integration of visual design elements within awareness campaigns, specifically explainer videos that focus on coral reefs. In recent years, visual design has been increasingly popular in digital and social media platforms. The usage of colour typography, composition, and imagery plays a main role in attracting audience attention, emotional responses, and delivering messages, especially in environmental awareness campaigns (Vallverdu-Gordi & Marine-Roig, 2023).

Moreover, visual design isn't merely an aesthetic component but a strategic communication tool capable of enhancing audience emotional engagement and behaviour changes. The studies in environmental and digital communication indicate that the well-crafted visual design has been found to have a significant influence on public engagement in terms of awareness and emotional deliveries, as well as cognitive responses from the audience.

Therefore, this literature review is focused on major areas: coral reef ecology and public awareness, visual design principles in awareness campaigns, visual storytelling in social media, and existing applications of content analysis in environmental communication. These themes are a foundation for identifying gaps within this study that are possibilities for contributing to improving visual strategies for coral reef awareness campaigns

2.1 Coral reefs and conservation efforts

2.1.1 Coral Reef

Coral reefs are one of the most biodiverse and ecologically valuable ecosystems on Earth. They are usually described as the "rainforests of the sea." They held support around 25% to all marine species despite covering less than 1% of the ocean floor, according to Wilkinson (2008). Their habitat complexity helps provide shelter, breeding grounds, and feeding thousands of fish, making them crucial for the global and regional marine food chain. Coral reefs in Malaysia have become an important value in terms of fisheries, productivity, supporting coastal communities, and sustaining ecotourism

industries, especially in Sabah, Terengganu, and Johor (Reef Check Malaysia, 2023). However, the current issues regarding coral reefs are very critical, especially as the survival of these ecosystems is threatened by human activities, climate change, and pollution.

2.1.2 Conservation in Malaysia

Coral reef conservation efforts in Malaysia have been gaining momentum through governmental agencies such as the Department of Marine Parks Malaysia and the Department of Fisheries Malaysia. WWF-Malaysia, Reef Check Malaysia, and Malaysia Nature Society are led by non-governmental organisations. They are the ones responding and managing the threats, such as climate-induced bleaching, destructive fishing, coastal development, and marine pollution. Handling these matters with methods through coral gardening, microfragmentation, and reef rehabilitation structures, which aim to improve coral health and growth.

Reef Check Malaysia's Annual Reef Report Card (2023) highlights that the continuous reef deterioration is caused by overfishing, marine debris, anchor damage, and unregulated tourism. From the report, the importance of strong community-based conservation initiatives is highlighted, which can help improve monitoring systems. At the same time, WWF-Malaysia encourages a sustainable attitude to coral reef protection through sustainable tourism as practice and fosters capacity-building among local communities through social media (WWF-Malaysia, 2022).

Awareness campaigns play an important role in promoting conservation. Despite the multiple studies highlighting that many existing campaigns on social media seem lacking in terms of strong visual engagement, narrative clarity, or emotional appeal to effectively attract public engagement. The gap in improving the need for well-structured, visually compelling digital campaigns that can deliver coral reef issues in a way that is emotionally engaging and resonates with Malaysian audiences, particularly youth.

2.2 Visual Design Principles in the Awareness Campaign

Visual design principles include balance, contrast, alignment, hierarchy, and spacing (Brigham Young University Research & Writing Center, 2024). They are essential for creating effective and engaging visual compositions, especially in campaign awareness. According to Hashimoto (2004), a strong visual design depends on the balance of elements such as colour, form, and composition to engage the audience and evoke emotional responses. It also emphasises that visual hierarchy and contrast guide the focus of the audience, while visual flow is created from the unity and rhythm.

In 2004, Hashimoto argued that visual communication must be balanced between aesthetic appeal and functionality or clarity. These are to ensure that the viewer manages to notice and understand the intended message that the conservation wants to deliver to audiences. The visual elements, such as organic forms, aquatic, colour palettes, and motion-based transitions, can evoke a sense of calmness or serenity in the audience with marine life. Therefore, these principles are a main bridge to the gap between scientific information and emotional engagement. This helps create an effective visual design that is not merely aesthetic but a persuasive tool that shapes how audiences perceive and respond to the messages.

In recent studies, there's a journal article examining the elements of motion graphic design in a Malaysian video campaign by Wahid et al. (2025). The use of motion-graphic elements in promotional videos and found that animation techniques, visual rhythm, and dynamic composition significantly influence viewer attention and message retention. These highlight the importance of visual design principles by shaping, interpreting, and responding to audiences. especially relevant to the environmental message, which carries the emotional weight to encourage public concern and behavioural awareness.

2.3 Visual storytelling and Narrative in the campaign

According to Dahlstrom (2014), storytelling is a structure of events fit into coherent sequences that help audiences understand complex information by enhancing comprehension and engagement. Storytelling has long been recognised as a tool in communication that is capable of invoking emotions, perceptions, and inspiring people. In environmental conservation communications, stories are used to transform abstract ecological issues into audience experiences. According to Dahlstrom in 2014, Narratives guide audiences to emotionally connect to scientific information by framing information within a human context, which makes it easier to understand and remember, especially for various audience ages. When the technique of storytelling is applied correctly, especially to coral reef conservation, it helps transform a complex ecological process such as coral beaching into a visually compelling and emotionally resonant way to encourage empathy and responsibility toward audiences.

According to El-Desouky in 2020, the effectiveness of visual storytelling in engaging audiences and enhancing message retention is achieved by integrating a narrative structure that has visual design principles such as composition, colour, and imagery. These help to evoke emotional responses and influence the audience with a positive outcome. This aligns closely with Ellen Lupton's concept in *Design is Storytelling* (2017), where she argues that visual communication is inherently narrative, which is shaped by designers to make audiences feel, think, and act through choreographing visual cues, sequencing information, and constructing meaningful user experiences. Visual storytelling can transform ecological and scientific information into compelling narratives, increase interest, empathy, and engagement with conservation efforts. The combination of visual and narrative strategies is the bridge that communicates coral reef awareness effectively.

Moreover, storytelling in awareness campaigns can be promoted as a sense of place and cultural identity. According to Dahlstrom and Scheufele (2018), effective environmental storytelling often integrates with local voices and cultural narratives to allow communities to perceive themselves as active participants in sustainability. These issues are relevant in Malaysia, which is diverse in coastal communities and has a livelihood that is intertwined with the sea. Embedding cultural storytelling into coral reef campaigns can foster a more inclusive narrative that connects ecological preservation with cultural heritage.

2.4 Social Media as a medium of awareness campaign

Social media are internet-based platforms that enable users to create, share, and interact with content, allowing communication and connection among individuals and communities through user-generated media (Carr & Hayes, 2015). Previous studies indicate that Malaysians frequently use social media for seeking information, entertainment, and diversion purposes due to habit (Meri et al., 2022). While platforms such as Instagram and YouTube engage with interactive connections and engagement with the audience, many campaigns still struggle to create a lasting emotional connection with the public interest. Abdullah et al. (2024) have found that Malaysians are a bit low on awareness and engagement levels toward marine biodiversity content. This is all due to the inconsistent content of campaigns in terms of delivery and limited exposure to the public. Previous research indicates that the campaign that heavily relies on static visuals or text tends to underperform compared to the one that has interactive visuals, short videos, or emotionally driven storytelling (Mulya et al., 2024).

Visual storytelling and audience interactivity are key to getting passive engagement or viewership into active participation. Therefore, there is a pressing need to enhance the visual design literacy of campaign materials, especially toward youth and urban digital audiences. Abdullah et al. in 2024 proposed that improved coordination between NGOs, digital designers, and educators is needed to create a stronger, more cohesive national approach to marine awareness.

According to Moughal in 2023, they studied the role of social media in shaping environmental knowledge and awareness within Malaysia's Education for Sustainable Development framework. They

revealed that digital platforms such as Instagram and Facebook help serve as a connection and influential tools for environmental learning. They also suggest that visual design in communication is a key to reinforcing environmental values among Malaysian youth. Therefore, conducting a content analysis of visual and narrative design components helps to identify how design quality and composition influence the audience's engagement and positive outcomes.

From these studies, the importance of social media and visual design is demonstrated, with gaps remaining. The research on Malaysian environmental communication is examined through a broad pattern of engagement or general sustainability education. There is a lack of academic work on design quality, narrative structure, pacing, colour strategies, or emotional appeals in coral reef content on social media.

2.5 Content Analysis in Environmental and Digital Media Research

Content analysis is a systematic method to interpret patterns, meanings, and structures that involve visual, textual, or multimedia content. Krippendorff (1980) states that what defines a content analysis is a research technique for gathering information from data in their contexts, emphasising reliability, transparency, and interpretive rigour. The usage of coding frameworks to examine themes such as emotional appeal, visual framing, colour, symbolism, scientific accuracy, or narrative structure.

The method offers strong adaptability to visual and multimedia formats, enabling systematic comparison across multiple campaigns and producing insights into both messages and interpretations. Despite that, it has its own limitations, including potential subjectivity in interpretation, challenges in coding complex consistently, and the difficulty of measuring real audience impact due to the lack of collected behavioural data. Despite its relevance, this method is rarely applied to the Malaysian coral reef campaign. The existing research is more focused on ecological data, tourism sustainability, or broad environmental outreach, which limits attention to design principles or narrative techniques.

2.6 Summary of Literature

The reviewed literature shows that content analysis, a method, is used to examine environmental campaigns that focus on visual, audience engagement, and narrative framing. Frameworks by Krippendorff provide a systematic approach that can be applied to a social media campaign. The research highlights the effectiveness of visual storytelling and social media in shaping public engagement toward environmental issues.

However, there are several gaps that remain. The studies on coral reef awareness in Malaysia are limited, and the existing campaigns appear confined to YouTube, leaving other high-engagement platforms to be a waste of use. There is also limited research on how platform choice affects message reach, especially for younger audiences who are primarily on Instagram, TikTok, and emerging mixed-media formats. Additionally, there are a few studies that examine how immersive or interactive media influence understanding of marine conservation.

These are gaps that create opportunities for future work. Especially for Malaysian government agencies, NGOs, and the tourism sector to leverage the social media platform as a strategy to enhance public engagement, helping economic value through ecotourism sectors, and strengthening the long-term conservation messaging in order to keep the beauty of the sea forest coral reefs for a long time. Therefore, further research should explore optimal platforms, audience behaviour, and the role of new media arts in communicating coral reef protection.

3 RESEARCH METHODOLOGY

The research methodology for this study used a qualitative content analysis study to focus on interpreting visual and motion elements in selected campaign videos and identify the messages, visuals,

and storytelling that currently exist, focusing on the topic of coral reefs awareness campaign within Malaysia. Following the framework proposed by Krippendorff in 1980. The study analyses several components of visual design in the selected video, such as visual design principles such as Balance, contrast, hierarchy, alignment, Repetition, Proximity, and spaces. Besides that, from a video aspect, also get into the study, such as video duration, audio, size, views, and comments. By applying Krippendorff's framework & the visual design principles, the study seeks to provide objective and replicable insights into how visual design in social media campaigns of coral reefs engages audiences through visual and narrative strategies.

3.1 Research Design

A qualitative content analysis design was used to allow systematic evaluation of visuals, animation, and narrative within the selected awareness campaign videos. This approach design was chosen to align with the studies, which are to analyse the visual and storytelling strategies used in the coral reef campaign, and to be implemented in an immersive experience awareness campaign explainer video with storytelling. This method did not involve human participants or surveys but relied on interpreting existing digital media. Krippendorff (1980) emphasises that content analysis is ideal for studies involving visual communication, interpretation, and digital media formats. Therefore, this research design is suitable for exploring design-driven patterns in conservation content.

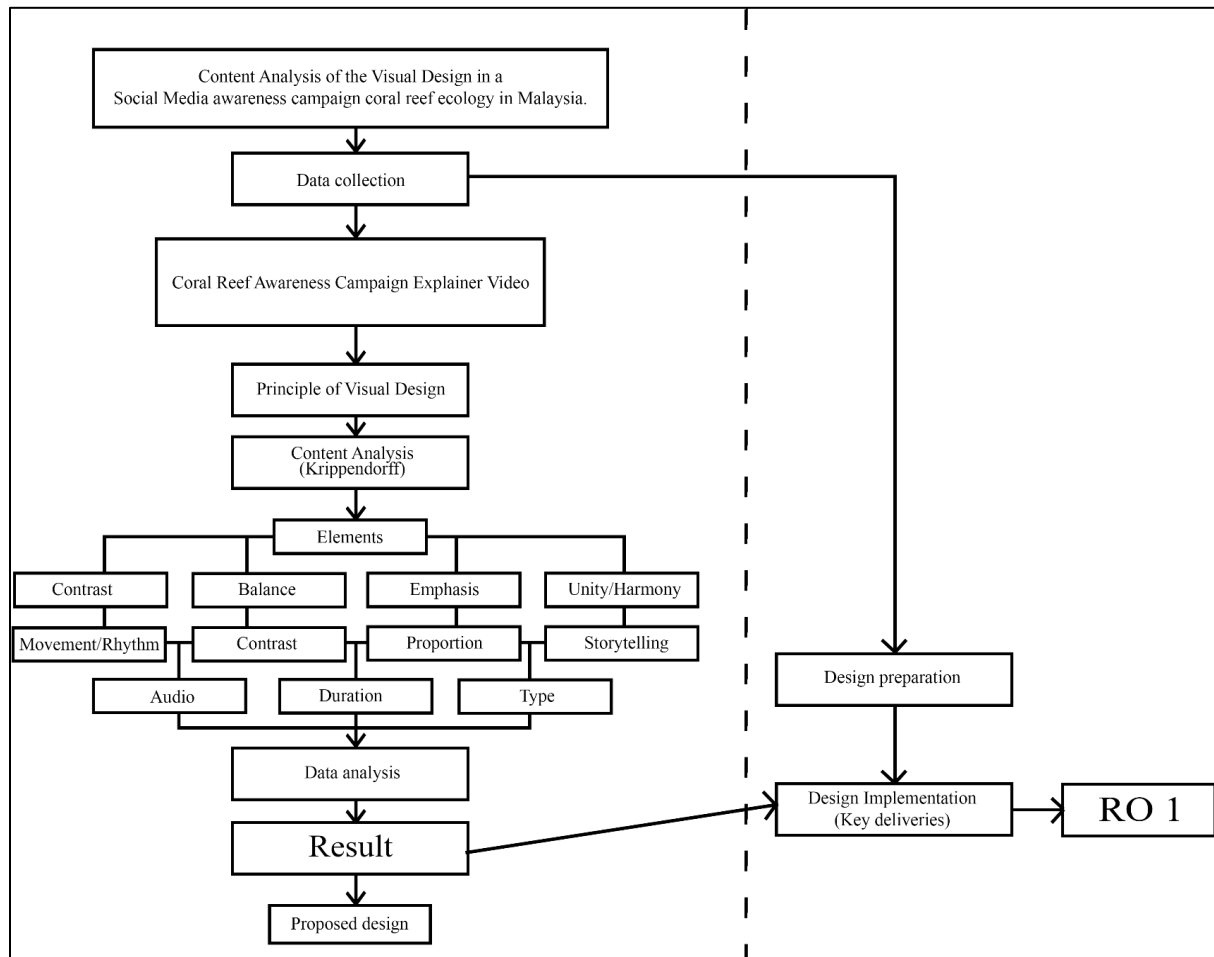


Figure 1 Framework of study

Table 2 Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Videos related to coral reef ecology or marine conservation	Tourism advertisements unrelated to conservation
Contains visual design or storytelling elements (e.g., motion graphics, animation, narration)	Videos shorter than 30 seconds and a maximum of 3 minutes
Published between 2018–2025	Non-English or non-Malay videos without subtitles
Publicly accessible on YouTube or NGO websites	Videos focusing on unrelated marine topics (shipping, fisheries industry)
Produced by conservation groups, NGOs, or verified media sources/channels	Amateur footage without educational intent

3.2 Selection of Sample

This study was conducted with two (2) awareness campaign videos that were based in Malaysia and four videos from the international region to identify and analyse the principles of animation elements used in the videos that are available on social media platforms. The videos are selected based on videos that contain animation elements, motion graphic elements, and visual storytelling and messages that are relevant to coral reef ecology. For justification, these selections are chosen due to region-based, high engagement, unique elements, and storyline in the video. Due to a lack of awareness campaigns based in Malaysia, only 2 videos that are available were chosen, which are related to Malaysian conservation. Each video contained multiple scenes, design strategies, colour sequences, and narrative structures, which help gather data for analysis in this study. Due to the limited content in other social media such as Instagram, Facebook, TikTok, and more, the samples are mostly taken from the YouTube platform as a source for study. The chosen platform has the most content that people usually look for first when connected to the internet, and these habits.

3.3 Analysis of Sample

Table 3 Content Analysis Visual Design Principles in Coral Reef Awareness Campaign Video

Criteria	Video		
Code	V1	V2	V3
Artwork			
Date	19 MAY 2025	20 MAY 2025	4 JAN 2013
Title	apakah kelunturan karang?(what is coral bleaching) by Reef Check (NGO)	langkah-langkah menangani kelunturan terumbu. by Check Reef (NGO)	Conserving our spectacular, vulnerable coral reef by Joshua Drew.
Duration	2:14 min	2:10 min	3:14 min
Style	Vector illustration (2D)	Vector illustration (2D)	Vector illustration (2D)

Principle of visual design	Contrast -Strong contrast between colourful reefs and bleached white corals highlights the severity of bleaching. Balance -Symmetrical reef compositions give stability, while asymmetry during bleaching scenes conveys imbalance and loss. Emphasis -Bleached corals are placed centrally or highlighted with colour shifts to draw attention. -Animated transitions (colour fading) emphasise cause-and-effect. Rhythm & Movement -Fish swimming and coral swaying create rhythm, reinforcing the underwater setting. -Gradual fading of coral colour establishes a visual rhythm of decline. Unity & Harmony -Consistent cartoon style unifies the visuals, ensuring accessibility. -Colour palettes harmonise with ocean themes, keeping the mood cohesive. Proportion & Scale -Corals are exaggerated in size relative to fish to emphasise their importance.	Contrast -Healthy vs. bleached coral imagery creates a stark visual contrast, reinforcing the problem. -Text colour contrasts with the background footage for legibility. Balance -Symmetrical framing of coral scenes provides stability. -Balanced composition between text and visuals avoids clutter. Emphasis -Key statistics (e.g., “80% reefs affected”) are emphasised with bold text and central placement. -Bleached coral imagery lingers on longer to stress severity. Unity/Harmony -Consistent oceanic colour palette ties visuals together. -Repeated motifs (coral close-ups, diver shots) unify the narrative. Movement/Rhythm -Flowing underwater footage creates a natural rhythm. -Sequential steps (“Langkah-langkah”) are paced evenly to guide viewers. Proportion/Scale -Wide shots show reef scale, while close-ups highlight fragility. -Human figures are small compared to reefs, symbolising nature’s vastness.	Contrast -Bright coral against muted ocean backgrounds ensures focal points stand out. Balance -Symmetrical layouts when showing “pearls on a necklace.” -Asymmetrical balance in reef scenes to mimic natural ecosystems. -Contrast in scale (tiny fish vs. large reef structures) emphasises ecological relationships. Emphasis -Key ideas (connectivity, insurance, representation) are visually reinforced with icons or metaphors. -Colour pops and motion draw attention to the narrator’s main points. Rhythm & Movement -Smooth transitions between habitats create a visual rhythm. -Animated arrows and flowing currents suggest migration and connectivity. Unity & Harmony -Consistent illustration style ties diverse visuals together. -Repeated motifs (pearls, necklace, currents) unify the narrative. Proportion & Scale -Fish, reefs, and mangroves are scaled to highlight relationships rather than realism. -Exaggeration helps communicate abstract concepts clearly.
Kinetic Typography	Exist	Exist	None
Type of video	PSA, Infographic, Educational explainer.	PSA, Infographic, Educational explainer.	PSA, Infographic, Educational explainer.
Context	scientific (explaining bleaching) and social (mobilising awareness and responsibility), tailored for Malaysian audiences but relevant globally.	highlighting the urgent issue of coral bleaching, explaining its widespread impact on reefs, and encouraging communities to take simple, practical steps to protect and restore coral ecosystems.	highlights how interconnected marine reserves strengthen coral reef resilience, protect diverse habitats, and balance conservation with the rural community through genetic evidence of connectivity

Criteria	Video		
Code	V4	V5	V6
Artwork			
Date	28 NOV 2016	18 APR 2018	27 AUG 2019
Title	Why should we care about coral reefs? by World Economic Forum.	What would happen if all the coral reefs died off? by Insider Tech	Why are coral reefs turning white? by WWF
Duration	2:21 min	2:49 min	0:45 sec
Style	PSA, Infographic, Educational explainer.	PSA, Infographic, Educational explainer.	PSA, Infographic, Educational explainer.
Element of visual design	Contrast -Strong contrast between the speaker's figure and the background ensures visibility. -Coral reef footage provides vivid colour contrast against the neutral studio visuals, creating emotional impact. Balance -Symmetrical framing of the speaker conveys stability and authority. -Visual inserts of reefs are balanced with the talk segments, preventing monotony. Emphasis -The speaker's face and gestures are emphasised through lighting and framing. -Key visuals (reefs, marine biodiversity) are strategically inserted to reinforce the main arguments. Unity & Harmony -Consistent colour palette and typography unify the video's look. -Smooth transitions between speaker and reef footage flow. Proportion -Text overlays are kept small relative to the frame, ensuring they support rather than dominate visuals. -Reef footage occupies the full screen when shown, giving it proportional weight to highlight urgency. Rhythm & Movement -Alternation between talking-head shots and reef visuals creates rhythm. -Pacing is deliberate, allowing viewers to absorb both	Contrast -Bright, colourful reefs vs. stark white bleached coral emphasise loss. -Text overlays stand out against busy underwater visuals. Balance -Symmetrical framing of reefs and fish schools creates harmony. -Asymmetry is used intentionally when showing destruction to create tension. Emphasis -Key statistics (like "50% of coral reefs lost") are highlighted with bold text and central placement. -Slow-motion shots emphasise fragility and beauty. Movement -Smooth pans and underwater tracking shots mimic natural ocean flow. -Animated arrows/graphics direct attention to processes like CO₂ absorption. Unity & Harmony -Consistent oceanic colour palette ties visuals together. -Integration of live footage with graphics maintains thematic cohesion. Proportion & Scale -Wide shots show reefs as vast ecosystems. -Close-ups of coral polyps remind viewers of the small-scale organisms at risk.	Contrast -Strong contrast between colourful reefs and bleached reefs dramatises the impact of climate change. Balance -Symmetrical framing of coral scenes creates stability, while shifts to asymmetry highlight disruption. Emphasis -Key moments (coral expelling algae, turning white) are emphasised with close-ups and slowed pacing. Unity/Harmony -Consistent colour palette and illustration style unify the narrative, keeping the message coherent. Movement -Animated transitions (coral shifting from vibrant to pale) guide the viewer's eye and reinforce cause-and-effect. Proportion/Scale -Large coral visuals compared to small fish emphasise reefs as foundational ecosystems. Rhythm/Repetition -Repeated imagery of bleaching across different corals builds rhythm and reinforces urgency.
Kinetic Typo-graphy	Exist	None	None
Type of video	PSA, Infographic, Educational explainer, 2D typography.	PSA, Infographic, Educational explainer.	PSA, Infographic, Educational explainer.
Context	highlight on why coral reefs are important, threat and what actions need to be taken to protect them	highlight the dire consequences if all coral reefs were to die off and explains the far-reaching impacts this loss in future	highlight why coral reefs are bleaching and encourage viewers to join the fight against climate change to help protect these vital ecosystems
Producer	verified media Channel	verified media Channel	Non-Government Conservation
Views	58k views	123k views	9k views
Audio	Female Voice Over age 20+ (English)	Female Voice Over (English)	Female Voice Over (English)
Link	https://youtu.be/3kb0bz-3lWc?si=Be-w1IW4sNdr3pS	https://youtu.be/_5DooxgwEiw?si=4gLsdsCZJj0Qip42	https://www.youtube.com/watch?v=O31K9pEqPXw
Region	International	International	International

3.4 Data Analysis

Table 4 Coding categories for each category and sub-category

Category	Sub-Category	Coding Description
Visual design	Colour palette	Use of marine-related colours (blue, green, turquoise)
Motion design	Typography	Font style, readability, hierarchy
Storytelling	Animation style	Type of animation and transitions
Storytelling	Narrative structure	Problem–solution, linear, emotional
Platform Strategy	Emotional appeal	Use of empathy, urgency, and connection
	Platform choice	Suitability of platform format

Table 5 Platform Usage and Communication Strategy

Platform	Frequency of Use	Content Strength	Limitation
Youtube	High	Detailed explanation	Limited reach
Instagram	High	Short attention capture	Under utilised
Tiktok	None	High engagement due to the trend	Not adopted
Youtube	High	Detailed explanation	Limited reach

Table 6 Summary of Key Findings

Theme	Observation	Implication
Visual design	Strong aesthetics, weak hierarchy	Message clarity reduced
Storytelling	Informational focus	Limited emotional engagement
Platform Strategy	YouTube-dominant	Missed youth audiences

4 FINDING AND DISCUSSION

Based on Table 1, 2, 3, 4, and Table 5, this research examines a total of six different videos that focus on coral reef awareness campaign videos and identifies similarities and differences between each one of them. The similarity of these videos is that a consistent style is used for vector illustrations (2D) as visual message deliveries to audiences interested in visual education learning videos. All the videos are the same video type, which is the Public Service Announcements (PSA) video, as a gateway for the format to engage with the audience and convey the messages.

The findings from this research showed that most of the video elements that are used in the video were 2D illustrations, vector illustrations, kinetic typography, and motion graphic elements. This study shows that the audience tends to watch the most that includes visually beautiful content, interesting and engaging storytelling, and well-known or established channels that have a lot of subscribers. Some studies show that teenagers tend to watch not much than 1 minute of video due to existing platforms like TikTok, Instagram Reels, and YouTube Shorts, which condition them to expect fast, stimulating content, leading to reduced patience for longer videos. According to the Community Research Institute (2025), short-form video platforms such as TikTok may negatively impact students' ability to sustain attention.

Through these studies, the typical Public Service Announcement (PSA) video duration is between 0:45 seconds and 2:50 minutes long. This indicates that the producer wants to construct a viewpoint for the audience's attention within a duration that is sufficient to deliver a message that is needed in time. From these studies, researchers have examined the elements that catch the audience's interest the most,

which is from the contrast of the video content that is strong, bright, colourful, highlighting the coral reef to make it feel lively in the ocean. The choices of the video are selected from 2016 to 2025 to find differences in each year in terms of visuals.

The change between colourful reefs and bleached reefs was to dramatise the impact of climate change, overfishing, and pollution, etc. Besides that, the elements of movement and rhythm engage the audience with how the pacing is deliberate, smooth transition, mimicking oceanic flow habitats, which allows viewers to absorb both spoken content and imagery. On the other hand, the elements of balance throughout the videos were important; the usage of symmetrical framing of the speaker conveys stability, destruction to create tension, and Contrast in scale (tiny fish vs. large reef structures) to emphasise ecological relationships. One of the ways to create a more interesting and engaging storytelling experience.

From the understanding, in terms of the existing content of the campaign awareness, there are gaps in Malaysia. The usage of visual design principles on campaign videos started to emerge in 2025 on Conservation YouTube channels, which focus on coral bleaching, with a duration of 1-2 minutes and targeted locally only. The differences between international awareness campaigns started to emerge again in 2019 due to COVID-19. There's a chance to explore the usage of the element for a specific target audience with the application of motion graphics and consideration of today's generation. Based on personal opinion, the involvement with the government is necessary to influence the Malaysian people regarding the matter. Not only them, but also other conservation groups need participation and to explore the usage of visual design in their campaign. These do not improve the communication aspect but create an emotional connection toward the coral reef.

CONCLUSION

This study analysed visual design elements and storytelling narratives that were applied in social media awareness campaigns that focus on coral reef ecology within the Malaysian context. By using qualitative content analysis, the research examined elements of visual design principles, hierarchy, colour usage, motion design, narrative structure, and platform selection campaign videos. These findings indicate that while visual aesthetics were generally well-executed, engaging visuals were often limited due to weak visual hierarchy, overpacing, and a lack of emotionally engaging narratives. Furthermore, the heavy reliance on only specifying platforms such as YouTube restricts the potential outreach audience to highlight the need for awareness for broader platform strategies.

In conclusion, this research emphasised the importance of implementing structured visual design principles and storytelling frameworks into environmental awareness campaigns to address current issues. By addressing the gaps in current design execution and platform usage, future campaigns may understand the enhancement of public understanding, emotional engagement, and interest in the coral reef conservation campaign awareness. Further, these studies may help contribute to environmental communication and visual design research by offering insights into how the usage of design-driven strategies can strengthen awareness efforts in Malaysia.

ACKNOWLEDGEMENT

I am grateful to the Research Ethics Evaluation Committee of the Faculty of Arts and Design at Universiti Teknologi MARA (UiTM) for permitting me to conduct this study. Furthermore, I would like to extend my gratitude to Associate Professor Dr. Sharkawi Che Din for his important contribution and help, as well as my supervisor, Miss Inda Murni Hairul Anuar, for her guidance throughout this research. Additionally, I wish to convey my appreciation to my family and friends for their support and encouragement throughout this research journey.

FUNDING

This research is self-funded.

AUTHOR CONTRIBUTIONS

All the authors have contributed to the paper meticulously.

CONFLICT OF INTEREST

There is no conflict of interest.

REFERENCES

- Abdullah, N., Mat, N. H., Noh, C. H. C., Idris, I., & Ibrahim, M. Y. (2024). Early assessment of a new media model for promoting marine conservation awareness in Malaysia: Social Media Model for Marine Conservation. *Multidisciplinary Science Journal*, 6(10), 2024189. <https://doi.org/10.31893/multiscience.2024189>
- Brigham Young University Research & Writing Center. (2024). *Visual design*. Retrieved from <https://rwc.byu.edu/00000188-e4bc-d222-a7ea-eefd83280000/visual-design-pdf>
- Carr, C. T., & Hayes, R. A. (2015). Social media: Defining, developing, and divining. In A. A. R. T. (Ed.), *Journal of Computer-Mediated Communication* (pp. 50–70). Wiley. <https://doi.org/10.1093/anncom/wlaf009>
- Dahlstrom, M. F. (2014). Using narratives and storytelling to communicate science with non-expert audiences. *Proceedings of the National Academy of Sciences of the United States of America*, 111(Supplement 4), 13614–13620. <https://doi.org/10.1073/pnas.1320645111>
- Dahlstrom, M. F., & Scheufele, D. A. (2018). (Escaping) the paradox of scientific storytelling. *PLOS Biology*, 16(10), e2006720. <https://doi.org/10.1371/journal.pbio.2006720>
- El-Desouky, D. F. (2020). Visual storytelling in advertising: A study of visual storytelling as a marketing approach for creating effective ads. *International Journal of Humanities, Social Sciences and Education (IJHSSE)*, 7(10), 118–127.
- Eldesouky, D. F. (2020). Visual storytelling in advertising: A study of visual storytelling as a marketing approach for creating effective ads. *International Journal of Humanities, Social Sciences, and Education*, 7(10), 118–127. <https://doi.org/10.20431/2349-0381.0710015>
- Hashimoto, A. (2004). *Visual design fundamentals: A digital approach*. Delmar Cengage Learning.
- Hyde, J. (2025, February 28). Results of the 2024 Reef Check Malaysia surveys: Challenges and opportunities. *Reef Check*. <https://www.reefcheck.org/results-of-the-2024-reef-check-malaysia-surveys-challenges-and-opportunities/>
- Lupton, E. (2017). *Design is storytelling*. Cooper Hewitt, Smithsonian Design Museum.
- Meri, A., Ahmad, S. A., Yusoff, S. M., Zakaria, N. S., Sarjono, F., Maraining, A., & Baco, Z. (2022). Patterns of social media usage among Malaysians during the COVID-19 pandemic. *Humanities and Social Sciences Letters*, 10(1), 27–35. <https://doi.org/10.18488/73.v10i1.2229>
- Mohd Nazri, N. A., Jamri, M. H., Ridzuan, A. R., Ab Ghani, S. N. F. F., Khairuddin, K., Hassan, M. S., & Mohamad Kamal, R. (2024). Strategic communications of the coral reef campaign. *e-Journal of Media and Society (e-JOMS)*, 7(3), 147–155.
- Moughal, W., Nordin, S. B. T. M., Salleh, R. B. T., & Abbasi, H. A. (2023). Role of social media in influencing environmental knowledge and awareness toward education for sustainable development in Malaysia. In E. Demir, M. H. Bilgin, H. Danis, & F. D'Ascenzo (Eds.), *Eurasian business and economics perspectives* (Vol. 26, pp. 25–35). Springer. https://doi.org/10.1007/978-3-031-30061-5_2
- Mulya, A., Muttaqin, N., Baskara, D. S., & Purwodani, D. L. (2024). Comparative effectiveness of narrative and informational content for audience engagement in educational social media: A systematic literature review. *MUKASI: Jurnal Ilmu Komunikasi*, 4(3).

- <https://doi.org/10.54259/mukasi.v4i3.4862>
- Reef Check Malaysia. (2025). *What we do*. Reef Check Malaysia. <https://reefcheck.org.my/about-us/what-we-do>
- Reef Check Malaysia. (2025, April 28). *Malaysia's coral reefs are in crisis after a record-breaking 2024 bleaching event*. Reef Check Malaysia. <https://reefcheck.org.my/malaysias-coral-reefs-in-crisis-after-record-breaking-2024-bleaching-event>
- Szereday, S., Chen, S. Y., Chew, K. L., Lee, L. K., Yusop, P. A. M., Fatta, A., Legada, C. J., Zainudin, N. B. F. B., Yaman, M. S. B., & Chelliah, A. (2024). *The 4th global coral bleaching event in Malaysia: Insights, outcomes, and paths forward*. Reef Check Malaysia. <https://reefcheck.org.my/reports>
- Vallverdu-Gordi, M., & Marine-Roig, E. (2023). The role of graphic design semiotics in environmental awareness campaigns. *International Journal of Environmental Research and Public Health*, 20(5), 4299. <https://doi.org/10.3390/ijerph20054299>
- Wahid, N. H. A., Ghazali, N. A. M., & Che Din, S. (2025). The study of motion graphic elements in promotional videos shows motion graphics' role in engagement (Malaysia). <https://doi.org/10.24191/idealogy.v10i2.835>
- Wilkinson, C. (Ed.). (2008). *Status of coral reefs of the world: 2008* (Global Coral Reef Monitoring Network). International Coral Reef Initiative. <https://icriforum.org/documents/status-of-coral-reefs-of-the-world-2008/>
- World Wide Fund for Nature Malaysia. (2024). *Conserve our coral reefs*. WWF Malaysia. https://www.wwf.org.my/how_you_can_help/donate_now/conserve_our_coral_reefs
- WWF-Malaysia. (2022). *Coral reef conservation programs*. WWF-Malaysia. Retrieved from https://www.wwf.org.my/how_you_can_help/donate_now/conserve_our_coral_reefs/