

## Influence of Social Media in Raising Marine Environmental Awareness among Maritime Students of Misamis University

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### Abstract

Maritime students nowadays play an important role in preventing marine environmental pollution. In this study, the researchers investigated the influence of social media in raising marine environmental awareness among maritime students of Misamis University. The researcher used a survey instrument to determine the following: 1. Level of Influence of social media; 2. Level of Awareness of the marine environment; and 3. Identify the relationship between the level of influence and the level of awareness. A quantitative research design was employed using a survey questionnaire distributed among selected maritime students. Data were analyzed using descriptive and inferential statistics. The researchers found out through the gathered data that most respondents view social media as a significant influence, and the maritime students have a high level of awareness regarding marine environmental issues. This implies that with an increasing marine environmental issue, maritime students are influenced and aware of these issues.

**Keywords:** Awareness, Influence, Maritime Students, Quantitative Research

### Introduction

Social media has become an essential element of individuals' lives, including students, in today's world of communication. Its use is growing significantly more than ever before, especially in the post-pandemic era, which is marked by a great revolution in educational systems. Recent investigations of using social media show that approximately 3 billion individuals worldwide are now communicating via social media (Iwamoto & Chun, 2020). The use of social media has grown ingrained in modern life; numerous environmental problems are occurring both locally and worldwide as a result of the advancements in globalization,

science, technology, and industry. Social media is a technique that can raise awareness of a variety of contemporary environmental issues considerably more quickly and widely in a short amount of time. Through interactions between environmental educators and students or regular people, the significance of environmental education in assessing the usefulness of social media can be determined. These days, people use social media to communicate with people locally and internationally on little to significant environmental issues and to support environmental causes (Mallick & Bajpai, 2019). Social Media plays a key role in spreading information, Issue mobilization, and public influence. Social Media enhances fundraising by using rich media, such as videos and images, to engage audiences emotionally, while punchy taglines create memorable messages that encourage sharing and support (Kim et al., 2024). Environmental awareness is knowing how our actions impact nature and doing things to preserve it. It is significant because it makes individuals care for the Earth, keeping it healthy and safe for us and future generations. Most of the harm to the environment is caused by humans, but even minor adjustments in how we live can preserve natural resources. Environmental change awareness, such as that of climate change, involves knowing the way weather patterns change over time. This understanding is central to achieving global goals such as preventing climate change and preserving life on Earth (Kousar et al., 2022).

The causes of marine environmental pollution (MEP), which include both natural waste and human activities like plastic pollution, are frequently unknown to college students. Governments have implemented measures such as bans on single-use plastics and campaigns to clean up the coast, but these measures are not enough on their own. The success of litter prevention programs also depends on addressing issues like pollution sources, social norms, individual littering behaviour, management difficulties, and local litter dynamics. Therefore, to effectively combat MEP, it is imperative to raise awareness of behaviours, attitudes, consumption patterns, and lifestyles (Gan et al., 2022).

As the economy and society evolve rapidly, educating students on the environment is a significant priority. Higher education institutions should actively engage in advocating the prudent utilization of natural resources and respecting nature. Given that students will determine the future, it is essential to devise educational programs that can enable them to comprehend environmental problems early enough. Successful environmental education involves both formal schooling and informal experience, enabling learners to become good observers and critical thinkers about the natural world (Lovichkina et al., 2023).

Social media helps many people to understand marine environment issues, and we divide its impact into two categories. First, content engagement encourages people to interact with each other by posting regarding issues about the marine environment, such as commenting, liking, sharing, and viewing videos. Social media is an interactive technology that allows users to share information, ideas, career objectives, and personal expressions over the Internet and in online communities. Because of its interactive features, quick communication, and ease of access, social media has become the primary means by which people collect and exchange information and express their ideas in today's digital age (Qu, 2022). Second, participation in environmental discussion analyzes how active people engage in conversations about marine issues, whether by offering their thoughts or starting to discuss with each other. The rise of social media platforms such as Facebook, WhatsApp, and Twitter significantly changed how people communicate, interact with communities, and support advocacy efforts.

These platforms serve an important role in disseminating information, stimulating public participation, and boosting collaborative efforts, particularly in developing cities and environmental preservation (Hussain et al., 2024). With these, it makes the maritime students more aware of what is happening in the marine environment. This awareness can inspire them to care more about protecting the ocean, especially since it directly relates to their field of study. The more they see and understand these problems, the more likely they are to take action to help preserve and protect marine life.

### *Objective of the Study*

The objective of this study aims to determine how social media influences maritime students in raising marine environmental awareness specifically:

1. Level of Influence of social media;
2. Level of Awareness of marine environment; and
3. Identify the relationship between the level of influence and the level of awareness.

### *Significance of the Study*

This study benefitted students, researchers, and school administrators by providing knowledge and ideas on how marine environmental awareness can affect maritime students. The study shows how social media influences by raising awareness about marine environmental issues among students. It would help them understand the importance of using social media for learning and awareness about local environmental issues. This study would provide valuable data and insights into how social media influence maritime students in raising marine environmental awareness, particularly in the maritime field. It can serve as a foundation for further studies on the impact of technology in education and environmental advocacy, paving the way for more comprehensive research in this area. This study offers crucial insights into how social media can be integrated into educational strategies and programs to enhance students' awareness and understanding of marine environmental protection. It would guide administrators in creating policies or initiatives that leverage social media for educational purposes, fostering a more environmentally conscious student body and aligning the university's goals with local sustainability efforts.

## **Research Methodology**

### *Research Design*

This study uses a quantitative descriptive survey design to determine the level of influence and the level of awareness to which social media can influence and raise awareness among maritime students in the marine environment. This method is used to obtain accurate data that can be interpreted and analyzed statistically. By using this approach, the study aims to provide a clear understanding of the correlation between the level of social media influence and level of awareness on marine environment.

### *Research Setting*

This study was conducted inside the Misamis University campus, including classrooms, the library, and any other places inside Misamis University where maritime students are present. The setting was chosen for its unbiasedness and comfort of the respondents being studied.

### *Respondents of the Study*

In this study, the chosen respondents were first-year, second-year and third-year BSMT (Bachelor of Science in Marine Transportation) students of Misamis University. The study uses the Raosoft platform calculator to determine the number of respondents needed to achieve the desired level of accuracy in this study. With a 736 for the population size, the confidence level is 95 percent, while the margin error is 5 percent, for a total of 253 sample sizes for the survey.

### *Data Gathering Procedure*

The researchers asked permission and gave consent letters to the maritime instructors and the students in conducting the study; the study was conducted in the maritime department. The respondents were given a survey questionnaire to answer based on their content engagement, participation in marine environment discussion, and level of awareness. The researchers, on the other hand, provided a brief instruction before they started to answer to inform the respondents of what to do. They were given 5 to 10 minutes to answer so that the researchers did not consume the class time. After answering the survey questionnaires, they were collected, interpreted and analyzed.

### *Validity and Reliability of Instrument*

To ensure the validity and reliability of this study, the researchers chose the data collection method and instrument carefully. They conducted pilot testing and collected data from a representative and adequate sample size. They analyzed the data using appropriate and robust statistical techniques, interpreted and reported results accurately and transparently, and addressed any limitations and implications.

Using Cronbach Alpha, the researchers consider Internal consistency 0.9 or higher; Excellent internal consistency, 0.8 or higher; Good internal consistency, 0.7 or higher; Acceptable internal consistency, 0.6 or higher; Questionable internal consistency, 0.5 or higher; Poor internal consistency Below and 0.5: Unacceptable internal consistency. The result of Cronbach Alpha should above 0.7 to make the researchers research made questionnaires acceptable and ready for conducting research.

### *Scoring Guidelines*

The findings of this study use tables in scoring the respondents percentages in determining the level of marine environmental awareness of maritime students of Misamis University. By answering the Likert scale method, the researchers can analyze and interpret the gathered data using the score they have answered. The research questionnaire is divided into three parts: Part I consists of the respondents' demographic profile, part II is the influence of social media, A. content engagement, B. participation in environmental discussion, and Part III is the level of awareness. Each part had 5 questions; a total of 15 questions was given. This study uses the Likert scale method. A Likert scale is a rating scale that quantitatively assesses how social media influences maritime students in raising marine environmental awareness. It is made up of 4 or more questions that measure a single attitude or trait when response scores are combined. In this study, we utilized the Likert scale. In the questionnaire, each of these responses is given a numerical value from 1 to 4. Higher numbers mean the person agrees more with the statement, while lower numbers mean they disagree.

*Statistical Analysis*

The research data was analyzed using SPSS software. For the data analysis, both level of Influence and level of awareness were used for Descriptive analysis, and for the relationship between the study variables, Pearson correlation coefficient was used.

Table 1

*Level of Influence*

Likert Scale	Likert Scale Interval	Interpretation
4	3.25 – 4.00	Very High
3	2.50 – 3.24	High
2	1.75 – 2.49	Low
1	1.00 – 1.74	Very Low

The table presented the Likert scale for the level of influence. The Likert scale has an ordered degree within a corresponding mean scale. For the Likert scale 1, the mean scale is 1.00 – 1.74; for the Likert scale 2, the mean scale is 1.75 – 2.49; for the Likert scale 3, the mean scale is 2.50 – 3.24; for Likert scale 4 the mean scale is 3.25 – 4.00.

Table 2

*Level of Awareness.*

Likert Scale	Likert Scale Interval	Interpretation
4	3.25 – 4.00	Very Aware
3	2.50 – 3.24	Aware
2	1.75 – 2.49	Unaware
1	1.00 – 1.74	Very Unaware

The table presented the Likert scale for the level of awareness. The Likert scale has an ordered degree within a corresponding mean scale. For the Likert scale 1, the mean scale is 1.00 – 1.74; for the Likert scale 2, the mean scale is 1.75 – 2.49; for the Likert scale 3, the mean scale is 2.50 – 3.24, and for Likert scale 4 the mean scale is 3.25 – 4.00.

*Ethical Considerations*

The researchers first asked permission from the respondents before conducting the research. They respected the respondents' decision and did not force them to answer the survey questionnaire. The researchers also made sure that all the respondents' personal information would be confidential and that procedures would be strictly followed to avoid bias.

**Results and Discussion***Level of Influence*

Using descriptive analysis, the data results reveal that social media plays a significant role in raising marine environmental awareness among maritime students. The high mean score and low variability suggest that the majority of respondents view social media as a key tool in influencing their understanding and knowledge of environmental awareness. Tables 3 and 4 show the results on the level of influence of maritime students.

The overall mean score of 3.50 suggests a "Very High" level of content engagement with marine environmental topics on social media. This indicates that, on average, participants are highly involved in reading, responding to, sharing, and being influenced by

posts concerning marine environmental matters. It demonstrates that social media significantly contributes to increasing awareness and influencing opinions about marine conservation among those surveyed. Conservation social media research has indicated that social media can offer compelling evidence of human–nature interactions on a range of topics. Social media data, especially Twitter, have been utilized in previous research to analyze threats to species like the illegal wildlife trade or anthropogenic climate change belief. (Kim et al., 2024).

Table 3

*Level of Influence of Maritime Students- Content Engagement of Maritime Students.*

Statement	Weighted Mean	Verbal Interpretation
1. I take the time to read and understand marine environmental posts or articles shared on social media.	3.6007	Very High
2. I have shared a post related to marine environmental content with my friends or followers on social media.	3.4545	Very High
3. I always react to videos regarding marine environmental issues.	3.4743	Very High
4. I actively follow social media accounts that focus on marine environmental issues.	3.5098	Very High
5. Social media content about the marine environment influences my views on conservation.	3.4782	Very High
<b>Overall Mean</b>	<b>3.5035</b>	<b>Very High</b>

Range: 1.00 – 1.74: Very Low: 1.75 – 2.49: Low: 2.50 – 3.24: High: 3.25 – 4

Table 4

*Level of Influence of Maritime Students- Participation in Environmental Discussion of Maritime Students*

Statement	Weighted Mean	Verbal Interpretation
1. I regularly take part in discussions about marine environmental issues on social media.	3.4031	Very High
2. I and my family frequently discuss marine environmental content on social media.	3.3517	Very High
3. I and my friends moreover talk about marine environmental issues on social media.	3.4466	Very High
4. I often attend discussions regarding the status of the solid waste management program in the community where I live.	3.3754	Very High
5. I believe that social media discussions about marine conservation led to policy changes and government action	3.4624	Very High
<b>Overall Mean</b>	<b>3.4079</b>	<b>Very High</b>

Range: 1.00 – 1.74: Very Low: 1.75 – 2.49: Low: 2.50 – 3.24: High: 3.25 – 4.00: Very High

The overall mean score of 3.4079, with a verbal interpretation of "Very High," suggests that people are actively participating in environmental discussions, regarding marine issues, on social media. This indicates that environmental awareness and concern are everyday among respondents, as evidenced by their active participation in discussions regarding marine conservation, waste management, and environmental policies. This high level of participation suggests that social media is an effective instrument for spreading knowledge and encouraging discussion about environmental issues. It also highlights the growing

importance of digital communication in boosting community involvement and possibly affecting policymaking and government activities related to the preservation of the marine environment. Social media sites are great resources for raising awareness regarding the conservation of biodiversity, facilitating fundraising, mobilizing public campaigns, and increasing support for pro-environmental causes (Chang et al., 2022). Public support and participation are essential for the successful implementation of waste management policies and objectives. The public's acceptance or approval of specific environmental policies constitutes what is regarded as pro-environmental behaviour that denotes policy support. These policies usually aim at enhancing knowledge, improving awareness, and raising the readiness of the public to engage in specific environmental actions. These are a notably mild manifestation of environmental awareness (Liu et al., 2023).

#### *Level of Awareness*

Using Descriptive analysis, the results reveal that maritime students, specifically BSMT students, generally have a high level of awareness regarding marine environmental issues. The small standard deviation further highlights consistency in the responses, showing that most students have a shared understanding of the importance of marine environmental awareness. Table 5 shows the results on the level of awareness.

Table 5

#### *Level of Awareness of Maritime Students*

Statement	Weighted Mean	Verbal Interpretation
1. I am aware of the role social media plays in spreading information about marine environmental issues.	3.6284	Very High
2. I am aware that the information about maritime issues on social media increase my environmental awareness.	3.4861	Very High
3. I am aware that social media can change how people view marine environmental issues.	3.6482	Very High
4. I am aware of the impact of environmental issues being discussed on social media	3.5256	Very High
5. I am aware that by following, liking, and sharing videos/photos on social media can make me updated regarding marine environmental issues.	3.5573	Very High
<b>Overall Mean</b>	<b>3.5691</b>	<b>Very High</b>

Range: 1.00 – 1.74: Very Low: 1.75 – 2.49: Low: 2.50 – 3.24: High: 3.25 – 4.00: Very High

The results show that all the participants, based on the weighted mean, answered strongly aware of the expanding use of social media. On average, students perceive social media as having a relatively high influence on their awareness of marine environmental issues. The influence of social media is enormous, and we can clearly see that some people do not have a smartphone. People around us use phones for social media or communication almost every day. The chance of the use of the Internet and the actual usage percentage of the Internet has increased from 21.8 hundred million persons in 2011 of the worlds to 49.5 hundred million persons in 2021 of the worlds. Therefore, there should be more and more individuals in the world was begin to utilize the different social networking tools. However, as we know, there are two sides to everything. This can be easily seen in the internet particularly in some social medias like Tiktok and YouTube and so on (Zhang, 2023). The popularity of social media

among students is increasing because technology has accelerated communication and made it easier, and following the pandemic, educational institutions began employing the use of social networks for educational purposes. This encouraged students to use these platforms even more for education and connecting with friends. (Chen & Xiao, 2022).

#### *Correlation between Influence and Awareness*

Using Pearson correlation coefficient<sup>®</sup> results reveal a significant positive relationship between the level of influence of social media and the level of environmental awareness among maritime students. This implies that social media serves as an effective tool in enhancing students' awareness of marine environmental issues.

The researchers found that the p-value is more than 0.01 at 0.424, so the null hypothesis is accepted. This means that there is no significant relationship between the use of social media and environmental awareness. The Pearson correlation coefficient between influence and awareness is 0.424, which indicates a moderate positive correlation, meaning that as social media's influence on students increases, their level of environmental awareness also tends to increase. The result shows that there is no significant relationship between the level of influence and level of awareness of Maritime students, with a p-value of 0.424 using a two-tailed test. People who use social media can be directly affected by the people they know well, like friends, family, and coworkers. Those who follow them can also impact them by sharing information, goals, news, and opinions. An influencer is someone who persuades another person to take the same action, make the same decision, or modify their behavior. He can also share information, ideas, and thoughts with multiple individuals (Gammoudi et al., 2022). Social media is now a strong informal means of learning and communicating information, particularly on critical issues such as conservation. With over a billion users globally, its extensive coverage and continuous activity make it strong for creating awareness and motivating individuals to love the environment. Online forums, such as fishing communities, can facilitate the transmission of positive practices by outlining clear standards and assisting one another. If the group norms are established and supported, individuals tend to adhere to them (Allison et al., 2022).

#### **Conclusion and Recommendations**

This study explored the influence of social media on raising marine environmental awareness among maritime students of Misamis University, specifically Bachelor of Science in Marine Transportation (BSMT) students. Utilizing a quantitative survey approach with a sample size of 253 respondents, the research aimed to determine both the level of social media influence and the level of environmental awareness among these students, as well as the relationship between the two. The findings reveal that social media plays a significant role in influencing students' understanding of marine environmental issues. Descriptive analysis showed a high mean score for the perceived influence of social media, indicating that most respondents recognize its impact as a key tool for disseminating environmental information. Similarly, the analysis of the level of awareness demonstrated that maritime students have a strong understanding of marine environmental issues, with responses showing minimal variability around a high mean score. Furthermore, the Pearson correlation analysis established a moderate positive relationship between social media influence and students' environmental awareness. This relationship was found to be statistically significant, suggesting that as the perceived influence of social media increases, students' awareness of

marine environmental issues also rises. The study underscores the importance of social media as an effective platform for promoting marine environmental awareness among maritime students. By leveraging this tool, educational institutions and environmental advocates can further enhance students' understanding and commitment to protecting marine ecosystems.

Utilize social media as an educational tool; maritime schools and organizations should use social media to teach people about ocean conservation. They can post interesting facts, videos, and campaigns to show why protecting the sea is important. For example, they can share videos about how plastic harms sea creatures and post tips on reducing pollution. By doing this, more people can learn and help take care of the ocean. When universities and environmental organizations work together, they improve social media content by providing expert knowledge and resources. This helps students stay engaged, learn more about environmental issues, and become more aware of their importance. We need to do more research to find out how much people know and care about marine environmental issues. This can help us understand what works best in raising awareness and educating more people. If we learn more about this, we can find better ways to protect the ocean and solve environmental problems more effectively.

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