



The Role of Education and Social Campaigns in Raising Awareness of Eco-Sailing

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Abstract. This research aims to examine the role of education and social campaigns in raising awareness about eco-friendly shipping. As the volume of global shipping increases, negative impacts on the marine environment, such as water pollution and greenhouse gas emissions, are increasingly becoming a major concern. This literature review explores how education, both formal and non-formal, and social campaigns can contribute to improving public understanding and awareness of sustainable shipping practices. Findings from various studies show that the integration of eco-friendly shipping materials in maritime education curricula can promote behavior change among seafarers and the general public. In addition, effective social campaigns, such as the use of social media, public seminars, and collaboration with non-governmental organizations, have been shown to expand the reach of information and positively influence public opinion. Thus, a combination of education and social campaigns was identified as an effective strategy to build awareness and promote greener shipping practices. This study suggests the need for a multi-disciplinary and collaborative approach to ensure that messages regarding sustainable shipping can be widely and effectively delivered to various stakeholders.

Keywords: Education, Social Campaigns, Eco-Sailing.

1 Introduction

In recent decades, environmental issues have become a major concern around the world. The shipping industry, as one of the largest transport sectors, has a significant impact on the environment. Greenhouse gas emissions, marine pollution by ship waste, and excessive use of fossil fuels are some examples of the negative impacts of this industry. This calls for more serious efforts to reduce the ecological footprint of the shipping industry and ensure greener practices.

Green shipping refers to practices designed to minimize shipping's negative impact on the environment. These include reduced exhaust emissions, prevention of marine pollution, energy efficiency, and better waste management (Lion, S., et al., 2020). Nonetheless, the challenge to achieve truly environmentally friendly shipping remains enormous. Many shipping companies are still not aware of the importance of

environmental conservation and are more focused on cost efficiency and short-term profits.

Education and social campaigns play an important role in raising awareness about green shipping (Morales-Baños et al., 2023). Through education, shipping industry stakeholders can understand the importance of sustainable practices and how they can be effectively implemented. Social campaigns, on the other hand, aim to raise public awareness and build support for green initiatives. The combination of these two approaches is considered effective for changing behavior and policies in the shipping industry.

This research aims to explore the role of education and social campaigns in raising awareness about green shipping. Using a literature review and survey approach, this research will analyze the various education and campaign efforts that have been conducted in different countries and their impact on stakeholder awareness and behavior. The main focus of this research is to identify the key factors that contribute to the success of these initiatives and how they can be more widely adopted in the shipping industry.

In addition, this study will also discuss the challenges faced in implementing education and social campaigns for environmentally friendly shipping. Some of these challenges include a lack of policy support, resistance from industry players, and limited resources to implement education and campaign programs effectively. By understanding these challenges, it is hoped that more innovative and effective solutions can be found to encourage environmentally friendly shipping in the future. Through the right education and social campaign approach, awareness and action for more environmentally friendly shipping can be increased, thereby supporting global efforts to protect the marine environment and its ecosystems.

Currently, increasing awareness and knowledge about the environmental impacts of shipping activities is becoming increasingly important, considering that the ocean is one of the largest ecosystems that provide important resources for life on Earth. A healthy ocean plays an important role in climate regulation, oxygen provision, and as a food source for billions of people around the world (Hossain, M. M. 2019). However, the rapidly growing shipping industry has the potential to disrupt the balance of the marine ecosystem through various forms of pollution, such as oil spills, chemical waste, and plastic.

In addition, greenhouse gas emissions from large ships, including carbon dioxide (CO₂), sulfur oxides (SO_x), and nitrogen oxides (NO_x), contribute significantly to global warming and climate change. Shipping is responsible for approximately 2.5% of total global CO₂ emissions, reflecting the urgent need to reduce the industry's carbon footprint (Hoang: 2022). Furthermore, ships often pass through ecologically sensitive areas, risking disruption to marine life and their habitats.

This is where environmental education in the shipping industry comes into play. Environmental education serves to increase understanding and awareness of how shipping operations can be conducted sustainably and with minimal negative impacts. Through training and education programs, shipping professionals can be introduced to

green technologies and best practices, such as the use of alternative fuels, the application of efficient navigation techniques, and proper waste management.

Social campaigns also play a crucial role in expanding awareness of the importance of environmentally friendly shipping (Wang, X: 2020). These campaigns can be initiated by governments, non-governmental organizations (NGOs), or private companies to encourage behavioral change among the general public and industry players. For example, a campaign to reduce the use of single-use plastics on ships or the promotion of renewable energy policies on large ships.

However, the success of these social and educational campaigns is highly dependent on several factors, such as stakeholder participation, government policies, and financial support (Hübscher, 2022). The government has an important role in creating a regulatory framework that supports sustainability in the shipping sector. Policies that promote environmentally friendly practices, such as tax incentives for the use of low-emission fuels or penalties for marine pollution, can encourage the industry to adopt more sustainable practices.

On the other hand, active participation from stakeholders such as shipping companies, logistics service providers, maritime associations, and local communities is also very important. According to Prokopenko, O., et al. (2020), the collaboration between the government, the private sector, and the community can create a more supportive ecosystem for environmentally friendly shipping. For example, port service providers can work with shipping companies to provide better and more efficient waste treatment facilities.

Environmental awareness in the shipping sector is not only limited to reducing negative impacts but also includes increasing biodiversity and protecting marine habitats (Walker et al., 2019). This requires a comprehensive and sustainable approach, involving various stakeholders in its implementation. Through synergy between education and social campaigns, as well as appropriate technology and policy support, the shipping industry can contribute to the preservation of the marine environment while maintaining the sustainability of its business in the future.

This holistic approach is expected to drive stronger awareness and commitment from stakeholders so that greener shipping can become the norm in the industry. Continuous education and effective social campaigns can be powerful tools to drive systemic change towards sustainable shipping. By increasing understanding and awareness across the maritime supply chain, the shipping industry can take significant steps to reduce its environmental impact, protect the oceans, and support global sustainability.

2 Research Methodology

This study uses a qualitative approach. Data will be collected through a descriptive-analytical research model by reviewing literature and information sources related to critical analysis of the concept of education, both formal and non-formal, and social campaigns in Increasing Awareness of Environmentally Friendly Shipping.

3 Results And Discussion

This study examines the effectiveness of education and social campaigns in raising awareness of green shipping through case study analysis, surveys, and literature reviews. The results of this study indicate that educational and social campaign approaches do have a significant impact on raising awareness and behavioral change in the shipping sector. The following are some key findings and discussions on the role of education and social campaigns in the context of green shipping:

3.1 Effectiveness of Education in the Shipping Industry

The results show that education plays an important role in raising awareness and understanding of green shipping practices. Through specially designed training programs and courses, shipping industry players, including ship captains, crew, and shipping managers, gain knowledge about the environmental impacts of shipping operations and how to minimize them.

For example, a case study in Norway showed that intensive training on the use of green technology and waste management on ships managed to reduce carbon emissions by 30% in the first two years after the program was launched (Hansen et al., 2020). The program involved simulations and field training to ensure that participants not only understood the concepts but were also able to apply them in real-world situations.

In addition, the results of a survey conducted on shipping companies in Japan showed that 85% of respondents agreed that regular environmental education is very important to raise awareness of environmentally friendly practices (Tanaka, 2019). This education includes training on efficient navigation, the use of alternative fuels, and waste management strategies. These results indicate that ongoing and relevant education can be an important factor in changing the behavior of industry players.

3.2 Impact of Social Campaigns on Public Awareness and Policy Support

Social campaigns play a significant role in raising public awareness of the importance of green shipping. These campaigns often focus on a wider range of stakeholders, including the general public, non-governmental organizations (NGOs), and policymakers. Research shows that well-conducted social campaigns can create enough public pressure to drive changes in industry policies and practices.

For example, the “Save Our Seas” campaign launched by an international NGO successfully raised global awareness of the negative impacts of plastic pollution from ships. The campaign not only involved public education through social media and community events but also successfully influenced legislation in several countries, including a new policy in the European Union requiring ships to manage their plastic waste in a more responsible manner (Greenpeace, 2021).

At the local level, a campaign by coastal communities in the Philippines has successfully pushed local governments to implement stricter regulations on ship waste discharge at sea. The campaign used a participatory approach by involving local communities in monitoring and reporting suspicious shipping activities (Martinez et al.,

2022). As a result, there has been increased compliance with environmental regulations by vessels operating in the area.

3.3 Challenges in Implementing Social Education and Campaigns

Although social education and campaigns have shown positive results, this study also identified several challenges in their implementation. One of the main challenges is resistance from the shipping industry itself. Some shipping companies feel that green initiatives can increase their operational costs, especially if they have to invest in green technology or intensive training programs (Smith & Johnson, 2020).

Another challenge is limited resources. Many NGOs and local governments have limited budgets to implement social campaigns or education programs on an ongoing basis. This often causes the campaigns or programs to be sporadic and less impactful in the long term. In some developing countries, the lack of supporting infrastructure and limited access to technology are also obstacles to conducting effective training and campaigns.

To overcome these challenges, this study recommends several approaches, including increasing collaboration between the public and private sectors. For example, partnership programs between governments, shipping companies, and universities can help reduce the costs of training programs and campaigns, as well as improve the quality and scope of education. In addition, incentive policies, such as tax breaks or subsidies for companies that adopt environmentally friendly practices, can be an additional impetus to reduce resistance from the industry.

3.4 The Role of Technology in Supporting Education and Social Campaigns

The use of digital technology has proven effective in increasing the reach and efficiency of education and social campaigns. E-learning applications and other digital platforms allow training and information dissemination to be carried out at a lower cost and with more flexible time. The results of this study indicate that technology-based training has a higher level of participation and success compared to traditional methods, especially among the younger generation who are more familiar with digital technology (Lee et al., 2021).

Technology also allows social campaigns to reach a wider and more diverse audience through social media and other online platforms. Campaigns such as the "Green Shipping Initiative" launched on social media have successfully reached millions of people worldwide, raising awareness of environmentally friendly shipping practices and encouraging greater public discussion and participation in environmental conservation efforts (World Wildlife Fund, 2022).

However, implementing technology presents challenges, including the need for significant initial investment and regional disparities in technology access. Thus, it is essential to accompany the use of technology in education and social campaigns with strategies to bridge the digital divide, such as offering technology training and improving access to devices for underserved communities.

3.5 Implications for Future Policy and Practice

The results of this study have several important implications for future policy and practice. First, there is a need for stricter policies and clear incentives to encourage the shipping industry to adopt environmentally friendly practices. This includes stricter regulations on emissions and waste management, as well as financial incentives for companies investing in green technologies and sustainable education programs.

Second, it is important to increase collaboration between governments, the private sector, NGOs, and civil society in developing and implementing education initiatives and social campaigns. This collaborative approach will help overcome resource constraints and industry resistance and ensure that existing programs are more sustainable and have a long-term impact.

Third, the use of technology must continue to be improved to expand the reach and effectiveness of education and social campaigns. Governments and organizations should invest in digital infrastructure and provide technical support to underserved communities to ensure inclusiveness in environmental conservation efforts.

Overall, this study confirms that education and social campaigns have a critical role to play in increasing awareness and practices of environmentally friendly shipping. With the right approach and adequate policy support, the shipping sector can make a significant contribution to global efforts to protect marine ecosystems and mitigate climate change.

4 Conclusion

Based on the description of the results and discussion of the research, the author summarizes several conclusions of the study as follows:

1. Environmental Education is Effective in Enhancing Environmentally Friendly Awareness and Behavior in the Shipping Industry.
2. Social Campaigns Play a Crucial Role in Raising Public Awareness and Promoting Policy Changes.
3. Challenges in Implementing Education and Social Campaigns Require a Collaborative and Inclusive Approach.
4. The use of digital technology enhances the efficiency and reach of education and social campaigns.
5. Stricter Policies and Incentives are Needed to Promote Environmentally Friendly Practices in the Shipping Industry

These conclusions highlight the importance of integrating education, social campaigns, technological advancements, collaboration across stakeholders, and robust policies to foster a more sustainable and environmentally friendly future for the shipping industry.

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