

PENERAPAN KONSTRUKTIVISME SOSIAL VYGOTSKY DALAM PEMBELAJARAN ETIKA MARITIM UNTUK MEMBENTUK TANGGUNG JAWAB SOSIAL MAHASISWA

APPLICATION OF VYGOTSKY'S SOCIAL CONSTRUCTIVISM IN LEARNING MARITIME ETHICS TO FORM STUDENTS' SOCIAL RESPONSIBILITY

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ABSTRAK

Sebagai negara kepulauan, Indonesia membutuhkan pelaut profesional yang tidak hanya kompeten secara teknis tetapi juga memiliki rasa tanggung jawab etika dan sosial yang kuat. Namun, pengajaran etika maritim di lembaga pendidikan tinggi maritim masih cenderung normatif dan tidak mendorong konstruksi nilai yang aktif. Studi ini bertujuan untuk menganalisis penerapan pendekatan konstruktivisme sosial Vygotsky dalam pengajaran etika maritim dan kontribusinya terhadap pengembangan tanggung jawab sosial mahasiswa. Studi ini menggunakan pendekatan kualitatif dengan desain studi kasus eksploratif di Politeknik Maritim Malahayati di Aceh. Data dikumpulkan melalui wawancara mendalam, observasi partisipan, dan studi dokumentasi dengan 20 mahasiswa dan 10 dosen, kemudian dianalisis secara tematik menggunakan NVivo. Hasil penelitian menunjukkan bahwa pembelajaran kolaboratif dan interaksi sosial mendorong konstruksi makna etika yang reflektif dan kontekstual. Implementasi scaffolding oleh dosen dalam *Zone of Proximal Development* (ZPD) membantu mahasiswa mengembangkan pemikiran etika yang independen dan menginternalisasi nilai-nilai moral. Lebih lanjut, terjadi transformasi dalam tanggung jawab sosial mahasiswa, yang ditunjukkan dengan peningkatan partisipasi dalam kegiatan sosial maritim dan kepedulian terhadap masyarakat pesisir dan keberlanjutan laut. Temuan ini menegaskan bahwa pendekatan konstruktivisme sosial efektif dalam membentuk karakter dan tanggung jawab sosial mahasiswa pelayaran.

Kata kunci: Konstruktivisme Sosial, Etika Maritim, *Zone of Proximal Development* (ZPD), Scaffolding, Tanggung Jawab Sosial, Pendidikan Maritim

ABSTRACT

As an archipelagic nation, Indonesia requires professional seafarers who are not only technically competent but also possess a strong sense of ethical and social responsibility. However, maritime ethics instruction in maritime higher education institutions still tends to be normative and does not encourage active value construction. This study aims to analyze the application of Vygotsky's social constructivism approach in maritime ethics instruction and its contribution to the development of students' social responsibility. The study used a qualitative approach with an exploratory case study design at the Malahayati Maritime Polytechnic in Aceh. Data were collected through in-depth interviews, participant observation, and documentation studies with 20 students and 10 lecturers, then analyzed thematically using NVivo. The results indicate that collaborative learning and social interaction foster the construction of reflective and contextual ethical meaning. The lecturers' implementation of scaffolding within the Zone of Proximal Development (ZPD) helped students develop independent ethical thinking and internalize moral values. Furthermore, there was a transformation in students' social responsibility, demonstrated by increased participation in maritime social activities and concern for coastal communities and marine sustainability. These findings confirm that the social constructivism approach is effective in shaping the character and social responsibility of maritime students.

Keywords: Social Constructivism, Maritime Ethics, *Zone of Proximal Development* (ZPD), Scaffolding, Social Responsibility, Maritime Education

1. Introduction

As the world's largest archipelagic nation, Indonesia holds a strategic position in the global maritime system. With more than 17,000 islands, the second-longest coastline in the world, and waters traversed by international shipping lanes, Indonesia's shipping sector plays a crucial role not only economically but also in maintaining human safety, marine environmental sustainability, and the social stability of coastal communities. The complexity of maritime activities demands professional seafarers who are not only technically superior but also possess a strong sense of ethical awareness and social responsibility. Therefore, maritime ethics education is a strategic element in maritime higher education.

However, the practice of maritime ethics education in maritime higher education remains dominated by a normative and transmissive approach. Ethics is positioned as a set of rules and obligations to be obeyed, rather than as the result of critical reflection on real moral dilemmas in maritime practice. Several previous studies have emphasized compliance with international regulations, such as the STCW and ISM Code, or quantitatively measured students' ethical attitudes. While important, these approaches have not adequately explained how ethical values are constructed, internalized, and realized in the social actions of maritime students. Thus, a significant research gap exists: the lack of studies examining the pedagogical process of maritime ethics learning from a social construction perspective and its impact on the development of students' social responsibility.

Furthermore, studies on social constructivism in values education largely focus on general education or teacher training contexts, while its application in high-stakes vocational education such as shipping is relatively rarely explored. Yet, the shipping work context has unique characteristics, including hierarchical pressures on board ships, emergency situations, the cultural diversity of crew members, and immediate and potentially fatal ethical consequences. The absence of studies integrating these characteristics into ethics learning design indicates a theoretical and empirical void that needs to be filled.

In this context, the theory of social constructivism developed by Lev Vygotsky offers a relevant and promising conceptual framework. This theory places social interaction, dialogue, and contextual experiences at the center of the values learning process. The concept of the Zone of Proximal Development (ZPD) and scaffolding

allows ethics learning to be designed collaboratively, reflectively, and incrementally, so that students not only understand norms but also are able to negotiate ethical meaning in real-life situations. However, to date, there has been little research systematically examining how a social constructivist approach is implemented in maritime ethics learning and its impact on the development of social responsibility in maritime students.

Based on this gap, the novelty of this research lies in three main aspects. First, this study shifts the focus of maritime ethics studies from normative compliance to the process of value construction through social interaction and contextual experiences. Second, this study integrates social constructivist theory with the context of maritime vocational education, which is characterized by high risk and multidimensional ethical complexity. Third, this study empirically analyzes the contribution of a social constructivist approach to the development of students' social responsibility, not only at the cognitive level but also at the affective and reflective dimensions.

This study aims to analyze the application of a social constructivist approach in maritime ethics learning and to explain the pedagogical mechanisms that contribute to the development of social responsibility in maritime higher education students. This study focuses on the Malahayati Maritime Polytechnic as the empirical context. Theoretically, this research is expected to enrich the discourse on ethics education and maritime vocational education. Practically, the findings of this study are expected to be a strategic reference in developing a maritime ethics curriculum and learning model that is more contextual, reflective, and oriented towards the formation of Indonesian seafarers with integrity and social responsibility.

2. Research Methods

This research employed a qualitative approach with an exploratory case study design to gain an in-depth understanding of the application of a social constructivist approach to maritime ethics learning and its contribution to the development of students' social responsibility. This approach was chosen because it allows for a holistic exploration of the social and pedagogical context within a complex, real-world situation. The research was conducted at the Malahayati Maritime Polytechnic in Aceh, which was purposively selected because it has developed maritime ethics learning based on interaction and social activities.

The study subjects consisted of 20 final-year students from the Nautical, Ship Machinery, and Ship Electrical Systems study programs, as well as 10 lecturers teaching courses related to ethics and maritime affairs. Participants were selected using a purposive sampling technique, with the criteria being active involvement in maritime ethics learning. Data were collected through in-depth semi-structured interviews, participant observation during the learning process and field activities, and documentation studies of learning materials and student activity reports.

Data were analyzed using thematic analysis, with coding, grouping themes, and interpreting meanings based on a social constructivist framework. The analysis process was supported by NVivo 12 Plus software. Data validity was maintained through source triangulation, member checking, peer debriefing, and an audit trail. This research was conducted in accordance with ethical research principles, including providing informed consent and protecting participant confidentiality.

3. Results and Discussion

This study aims to explore how a social constructivist approach is applied in maritime ethics learning and how it impacts the development of students' social responsibility. The results were obtained from data triangulation through in-depth interviews, learning observations, and documentation studies, which were then analyzed thematically using NVivo software.

Three main areas of study emerged from the data analysis: (1) Collaborative learning and social interaction, (2) The role of lecturer scaffolding in the Zone of Proximal Development (ZPD), and (3) Transformation of students' social responsibility.

A. Collaborative Learning and Social Interaction

The results indicate that maritime ethics learning at the Malahayati Maritime Polytechnic takes place in a dialogic and participatory manner through group discussions, case studies, and social projects integrated into lectures. This pattern marks a shift from a normative-transmissive approach to learning that positions students as active subjects in constructing the meaning of ethics. Students no longer view ethics merely as a set of rules to be obeyed, but as values constructed through a process of social negotiation. These findings align with Vygotsky's (2020) view, which asserts that an individual's cognitive and moral development is shaped through meaningful social interactions. This finding is reinforced by Dixon's

(2022) assertion that collaborative learning is effective in fostering critical understanding. Prasetyo (2020) also emphasized that language and dialogue are primary media in the social construction of knowledge.

The interactions fostered in group discussions allow students to exchange views, test arguments, and collectively reflect on ethical values. In this process, differences in background and experience become learning resources that enrich students' ethical perspectives. These dialogic activities demonstrate that learning is not solely outcome-oriented but also focuses on the social processes that shape students' moral thinking. This reinforces Dixon's (2022) findings on the importance of collaboration as a space for developing critical understanding and confirms Vygotsky's (2020) view that social interaction is fundamental to the development of higher mental functions. Thus, maritime ethics classes function as learning communities that enable the collective construction of values through language and dialogue, as emphasized by Prasetyo (2020).

Discussions of marine pollution cases and ethical dilemmas in the seafaring profession demonstrated that students were able to connect ethical norms with real social and ecological impacts in coastal communities. Students not only identified right and wrong but also analyzed the moral consequences of each decision on environmental sustainability and social well-being. This process demonstrates a shift from a declarative understanding of ethics to a reflective and contextual one. This finding corroborates research by Sari and Prasetyo (2022), who found that collaborative projects encourage the internalization of ethical values, and aligns with Hidayati (2021), who stated that active student involvement contributes to increased social awareness. In the context of maritime education, Nugroho (2011) also emphasized the importance of contextual ethics education in shaping the character of professional seafarers.

Furthermore, the selection of local issues such as marine debris, migrant seafarers' rights, and coastal sustainability demonstrates students' increased social sensitivity to the maritime realities around them. These issues bridge ethical concepts and concrete experiences, making learning more relevant and meaningful. This indicates that collaborative learning not only strengthens cognitive aspects but also builds empathy and social awareness in students. This finding is relevant to Susilowati (2017), who emphasized maritime ethics based on

environmental conservation; Chang and Lee (2022), who highlighted the human rights dimension of maritime work; and the UN report (2020), which emphasized the urgency of maritime education to support global ocean sustainability.

Overall, the results of this study indicate that collaborative learning and social interaction serve as a space for constructing ethical values, enabling students to develop critical understanding, social empathy, and professional awareness as future seafarers. Through dialogue, negotiation of meaning, and engagement in real-life issues, students not only learn about ethics but also learn to become moral subjects within the maritime community. These findings confirm that a social constructivist approach is effective in transforming students' ethical understanding from normative to reflective and transformative, as emphasized by Vygotsky (2020), Dixon (2022), and Prasetyo (2020). Thus, collaborative-based maritime ethics learning plays a strategic role in shaping the character of seafarers with integrity and social responsibility.

B. Lecturer Scaffolding and the Zone of Proximal Development (ZPD)

Research findings indicate that lecturers in maritime ethics learning at the Malahayati Maritime Polytechnic act as facilitators who consciously implement adaptive scaffolding through open-ended questions, reflective feedback, and the use of contextual case studies. This pattern positions lecturers not as the final source of ethical truth, but rather as learning facilitators who help students gradually build an understanding of values. This strategy allows students to develop ethical thinking capacity according to their developmental level. This practice confirms Vygotsky's (2020) Zone of Proximal Development (ZPD) theory, which states that the most effective learning occurs when students are helped to transcend their initial abilities. This finding is further supported by Wood, Bruner, and Ross (2023), who emphasized the importance of tutoring in the problem-solving process. Rahmawati (2022) also demonstrated that scaffolding significantly contributes to students' moral development.

Classroom observations revealed that when students faced ethical dilemmas, lecturers did not immediately provide normative answers but instead guided them through a series of reflective questions that encouraged the exploration of various decision alternatives. This approach

stimulated students to examine arguments, assess moral consequences, and reflect on the values underlying their choices. Thus, students learned that ethics is not about finding immediate right-or-wrong answers, but rather a continuous process of reasoning. This finding aligns with Dixon (2022), who emphasized the role of facilitators in creating spaces for critical dialogue in collaborative learning, and supports Prasetyo's (2020) assertion that reflective dialogue is central to the construction of social knowledge.

Through the scaffolding provided by lecturers, students gradually demonstrated improved ethical analysis skills and more independent decision-making. In the initial stages, students still rely on lecturers' guidance, but as the learning process progresses, they are able to formulate moral considerations more systematically and argumentatively. This development indicates that students are moving from the zone of actuality to the ZPD, ultimately achieving independent ethical thinking. This finding confirms Vygotsky's (2020) view that appropriate pedagogical interactions can accelerate the development of higher mental functions, and is relevant to Wood et al. (2023), who asserted that gradual support is most effective when gradually released.

In the context of maritime ethics, lecturer scaffolding also serves to link ethical dilemmas to the realities of the seafaring profession, such as responsibilities for safety, the environment, and teamwork on board. This approach emphasizes that ethics is not learned as an abstract concept, but as a basis for professional decision-making. This finding aligns with Nugroho (2011), who emphasized the need for maritime ethics education that builds professional awareness, not simply adherence to rules. Thus, scaffolding serves as a bridge between ethical theory and the complex and high-stakes practice of maritime affairs.

From an affective perspective, students demonstrated a shift in perspective, emphasizing that ethics is a life value directly linked to their identity and responsibilities as prospective seafarers. Ethics is no longer perceived as an academic requirement, but rather as a moral commitment in pursuing a profession. This demonstrates that scaffolding not only enhances cognitive aspects but also encourages the internalization of values. This finding corroborates Rahmawati's (2022) argument on the role of gradual guidance in moral formation. This aligns with Vygotsky's (2020) emphasis on the integration of cognitive and affective aspects in individual development, and is supported by

Hidayati's (2021) emphasis on the importance of active learning experiences in fostering social awareness.

Overall, the results of this study confirm that the role of lecturers as facilitators who implement scaffolding within the ZPD is a key mechanism in learning maritime ethics based on social constructivism. Through adaptive guidance, reflective dialogue, and linking to professional contexts, students are encouraged to develop independent ethical thinking while internalizing moral values. This finding confirms the relevance of the theories of Vygotsky (2020) and Wood et al. (2023), and Rahmawati (2022) in the context of maritime vocational education, demonstrating that appropriate pedagogical design can transform ethics learning from merely the transfer of norms into a process of fostering students' professional awareness and social responsibility.

C. Transformation of Students' Social Responsibility

Social constructivism-based ethics learning in the context of maritime education has been shown to have a significant impact on transforming students' social responsibility. Students not only demonstrated an increased understanding of ethics at the conceptual level but also reflected this through active involvement in maritime social activities, such as marine debris reduction campaigns and safety education for coastal communities. These changes indicate that learning rooted in social interaction and real-life experiences can encourage students to position themselves as part of the broader maritime community. This finding aligns with Rahayu (2023), who found that social project-based learning is effective in building environmental awareness, and is reinforced by Sari and Prasetyo (2022), who emphasized the role of collaborative action in fostering social responsibility. From a professional responsibility perspective, Carroll (1991) also emphasized that ethical and philanthropic dimensions are integral to professional behavior.

Analysis of student reflection journals indicates a shift in moral orientation from simply distinguishing right from wrong to an understanding of collective responsibility as members of a maritime community. Students begin to recognize that every action in shipping practices has broad social and ecological implications. These reflections demonstrate a growing empathy for coastal communities and a growing concern for marine sustainability. This

finding aligns with Vygotsky's (2020) perspective, which emphasizes the role of social reflection in the internalization of values. It is reinforced by Hidayati (2021) who emphasized the relationship between critical reflection and social concern. It is also relevant to Susilowati (2017) who emphasized the importance of maritime ethics based on environmental sustainability.

Furthermore, students' direct involvement in social projects demonstrates their ability to plan, implement, and evaluate the impact of activities relatively independently. Students act not only as participants but also as initiators and managers of activities oriented toward the interests of coastal communities. This demonstrates the development of active moral agents in the maritime context, individuals capable of translating ethical values into concrete actions. These findings corroborate Chang and Lee's (2022) emphasis on the importance of ethical awareness in global maritime work. This finding aligns with the UN (2020) report on the role of young people in maintaining marine sustainability. It also supports Carroll's (1991) view that social responsibility must be embedded in everyday professional practice.

This transformation in social responsibility also demonstrates the integration of cognitive, affective, and behavioral aspects in ethics learning. Students not only understand the concept of social responsibility but also perceive its urgency and embody it in collective action. This confirms that social constructivism-based learning can produce relatively sustainable attitudinal changes, not simply a fleeting response to academic demands. This finding aligns with Vygotsky's (2020) emphasis that internalization of values occurs through meaningful social experiences, and is reinforced by Hidayati's (2021) evidence that active learning experiences contribute to the development of students' social awareness.

In the context of maritime vocational education, this change has strategic significance because the maritime workforce demands seafarers who are not only technically competent but also socially responsible for human safety and environmental sustainability. Ethics education that fosters this awareness is a crucial foundation for developing maritime professionals with integrity. This finding aligns with Susilowati (2017), who emphasized maritime ethics based on environmental conservation, and is supported by Chang and Lee (2022), who emphasized the

importance of a human rights perspective in global maritime work practices.

Overall, the results of this study confirm that ethics learning based on social constructivism contributes significantly to the transformation of students' social responsibility. Through reflection, collaborative action, and direct involvement in maritime issues, students develop into moral subjects capable of integrating ethical values into professional practice. These findings reinforce the relevance of a social constructivist approach in maritime education, as emphasized by Vygotsky (2020), Rahayu (2023), and Sari and Prasetyo (2022). They also demonstrate that social responsibility, as formulated by Carroll (1991), can only be authentically realized when ethical values are lived out in concrete actions within the maritime community.

D. Theoretical Synthesis

Overall, the findings of this study confirm the relevance of Vygotsky's social constructivist theory in maritime ethics learning, particularly through the role of social interaction, scaffolding, and collective reflection as key mechanisms in fostering students' cognitive, affective, and moral development. Dialogic and participatory learning processes enable students to actively construct ethical meaning, rather than simply passively accepting norms. These results are consistent with Vygotsky's (2020) assertion that higher-order mental functions develop through social mediation, and are reinforced by Wood, Bruner, and Ross (2023) who demonstrated that step-by-step guidance is effective in developing problem-solving skills. Dixon (2022) also emphasized that collaboration is a crucial prerequisite for meaningful learning.

A synthesis of findings indicates that social interactions in group discussions and collaborative projects serve as spaces for value negotiation, where students learn to understand diverse perspectives and collectively construct ethical reasoning. Within a social constructivist framework, this process affirms that ethics is not individual and static, but rather a dynamic social construct. This aligns with Dixon's (2022) view of collaborative learning as a vehicle for developing critical understanding and reinforces Vygotsky's (2020) argument that language and dialogue are key tools in the internalization of values. Thus, the maritime ethics class can be understood as a community of practice that facilitates the formation of students' moral identities.

Furthermore, the role of lecturers' scaffolding within the Zone of Proximal Development (ZPD) demonstrates how adaptive pedagogical support can bridge students' initial understanding with more independent ethical thinking skills. Lecturers function as mediators, facilitating the transition from dependence to reflective independence. These findings confirm the relevance of Vygotsky's (2020) concept of the ZPD in the context of vocational education and extend the findings of Wood et al. (2023) on the importance of tutoring in complex learning processes. Thus, scaffolding functions not only as a cognitive strategy, but also as a means of developing moral and professional awareness.

The integration of collaborative learning with maritime social projects demonstrates that high-stakes vocational education such as shipping can still adopt a humanistic and reflective approach. Students not only practice technical skills but also internalize ethical values through direct involvement in real-world issues in coastal communities. This finding expands on Rahayu's (2023) research, which emphasized the effectiveness of social projects in building environmental awareness. It aligns with Sari and Prasetyo's (2022) study on the role of collaborative action in fostering social responsibility. It also supports Nugroho's (2011) emphasis on the importance of the maritime context in seafarers' ethics education.

More broadly, this research demonstrates that a social constructivist approach can bridge the demands of vocational professionalism with the development of character and human values. This confirms that shipping education should not be trapped in a technocratic orientation but can be developed as a space for the formation of reflective moral subjects. This conclusion aligns with Carroll's (1991) social responsibility framework, which places ethical and philanthropic dimensions as integral to professional behavior, and is reinforced by the UN's (2020) marine sustainability perspective, which emphasizes the role of education in safeguarding the future of maritime ecosystems.

Thus, this study provides empirical evidence that the social constructivism approach is not only relevant in general education contexts but also effective in maritime vocational education for developing seafarers with character and social responsibility. These findings also reinforce Chang and Lee's (2022) study on the importance of ethical awareness and human rights in global maritime work. Theoretically, this study enriches

the discourse on adapting social constructivism in high-risk vocational contexts, while also confirming that ethical learning rooted in social interaction, scaffolding, and collective reflection is a crucial foundation for developing maritime professionals with integrity and a focus on sustainability.

4. Conclusion

Based on the above study, the author summarizes the following conclusions:

- a) Collaborative learning based on social constructivism effectively develops a reflective and contextual understanding of maritime ethics, so that students no longer interpret ethics as normative rules, but as values relevant to the realities of the seafaring profession.
- b) Lecturer scaffolding within the Zone of Proximal Development (ZPD) plays a key role in developing independent ethical thinking and internalizing moral values through adaptive guidance and reflective dialogue.
- c) The social constructivism approach encourages a transformation in students' social responsibility, as reflected in increased empathy, environmental awareness, and active participation in maritime social activities.
- d) Social constructivism has proven relevant and applicable in maritime vocational education, as it integrates mastery of technical competencies with the development of seafarers with integrity and social responsibility..

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