

Navigating Risk: Perspectives of Semester 3 Cadets at the Maritime Institute Jakarta on Risk Assessment Approaches for Offshore Structures

Marudut Bernadtua Simanjuntak

Maritime Institute of Jakarta (Sekolah Tinggi Ilmu Pelayaran - Jakarta)

Jl. Marunda Makmur No. 1 Cilincing, Jakarta Utara. Jakarta 14150

Corresponding author: bernadmarudut@gmail.com

Abstract. *This study delves into the perspectives of 240 Semester 3 cadets at the Maritime Institute Jakarta (STIP Jakarta) regarding Risk Assessment Approaches for Offshore Structures. Employing a qualitative descriptive approach, the research unfolds over three semesters, encompassing approximately 18 months of academic, mental, and professional preparation for internships in the maritime industry. The cadets, hailing from diverse regions across Indonesia, undergo an international program at STIP Jakarta, necessitating a mastery of English communication in line with International Maritime Education standards. The research navigates through the complexities of maritime education, focusing on academic preparedness, motivations, language proficiency, and perspectives on risk assessment. Academic preparedness reveals a commendable level among cadets, yet the identification of lower preparedness levels signals potential areas for curriculum refinement. Intrinsic motivation, predominantly rooted in a passion for the maritime profession, underscores the institute's success in instilling commitment and purpose among cadets. Language proficiency emerges as a critical determinant, with recommendations for targeted language support to bridge proficiency gaps. The qualitative analysis of cadet perspectives on risk assessment unveils themes of practical application, interdisciplinary understanding, and the pivotal role of language proficiency. These themes advocate for a paradigm shift in teaching methodologies and curriculum design to align with industry demands. The research concludes with implications for curriculum refinement, passion cultivation, language support programs, practical integration, interdisciplinary collaborations, and a continuous feedback mechanism. These recommendations serve as a blueprint for STIP Jakarta's evolution, ensuring the institute remains at the forefront of excellence, innovation, and global relevance in maritime education.*

Keywords: *Cadet Perspectives, Curriculum Refinement, Language Proficiency, Maritime Education, Risk Assessment*

INTRODUCTION

Maritime education stands at the nexus of academic rigour, practical proficiency, and global communication skills, nurturing the future custodians of the vast seas (Albayrak & Ziarati, 2012; Ghosh et al., 2014). At the forefront of this educational landscape is the Maritime Institute Jakarta (STIP Jakarta), a beacon of maritime excellence in Indonesia. This research embarks on a comprehensive exploration of the perspectives of Semester 3 cadets at STIP Jakarta, focusing on their engagement with the study of Risk Assessment Approaches for Offshore Structures. The investigation transcends conventional academic boundaries, delving into the intricate tapestry of cadet experiences, motivations, and competencies within the maritime education framework. Founded on the principles of preparing cadets academically, mentally, vocationally, and professionally, STIP Jakarta epitomizes the commitment to producing qualified and exceptional seamen, deck officers, and engine officers. The institute's three majors in Nautical, Technical, and Port and Shipping Management serve as pillars for applied bachelor's degrees, fostering a comprehensive understanding of the maritime domain.

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* Marudut Bernadtua Simanjuntak, bernadmarudut@gmail.com

Complementing these majors are professional training programs tailored for Deck Officers and Engine Officers, ensuring a holistic approach to maritime education.

The geographical diversity of STIP Jakarta's student body is emblematic of Indonesia's rich tapestry, with cadets hailing from various regions, each steeped in its unique linguistic and cultural heritage. While Bahasa Indonesia and traditional languages dominate their daily interactions, the global orientation of STIP Jakarta demands proficiency in English communication. The imperative to produce international officers capable of seamlessly integrating into the global maritime community underscores the significance of mastering English in alignment with International Maritime Education standards, particularly those stipulated by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping for Seafarers (STCW) (Trenkner, 2009; Young, 1995).

As Semester 3 cadets undergo a crucial phase of their education, preparing for internships in Shipping, Cargo, or international delivery industries, the study of Risk Assessment Approaches for Offshore Structures emerges as a pivotal component. This subject encapsulates the complexities and challenges that maritime professionals encounter, particularly in ensuring the safety and integrity of offshore structures amidst the dynamic and often perilous maritime environment. The urgency of exploring cadet perspectives on risk assessment for offshore structures arises from the symbiotic relationship between academic preparation and real-world application (Ferritto, 2016; Manuel, 2017). Understanding the nuanced viewpoints of cadets, who represent the future vanguards of the maritime industry, is imperative for refining educational approaches. The needs of this research extend beyond traditional academic assessments, delving into the realms of motivation, self-checked intelligence, and the broader spectrum of professional competences that influence cadet development (Bertram et al., 2018).

The global nature of the maritime industry amplifies the significance of English communication skills (Mahboob et al., 2016). While cadets navigate the complexities of risk assessment, their proficiency in English becomes a critical determinant of their effectiveness in international maritime scenarios (Chircop, 2015; Neilson & Rossiter, 2013). The urgency lies in aligning the educational paradigm with the demands of the industry, ensuring that cadets not only grasp the technicalities of risk assessment but also communicate and collaborate seamlessly on an international stage. A nuanced exploration of risk assessment approaches for offshore structures reveals a dynamic landscape shaped by technological advancements, regulatory frameworks, and evolving industry standards. The literature underscores the multifaceted nature of risk assessment, acknowledging its pivotal role in maritime safety and the prevention of catastrophic events. The maritime industry's reliance on offshore structures,

ranging from oil platforms to wind farms, necessitates a comprehensive understanding of risk factors (de la Peña Zarzuelo et al., 2020). Traditional risk assessment models, often rooted in probabilistic methodologies, have evolved to incorporate dynamic factors such as human behaviour, environmental variables, and technological vulnerabilities. This evolution reflects a paradigm shift towards holistic risk management strategies that transcend mere quantitative assessments.

In the context of maritime education, the integration of risk assessment into curricula has gained prominence. Educational institutions recognise the imperative of equipping future maritime professionals with the skills to navigate risk scenarios effectively (IMO, 2018; Mankabady, 1986). This aligns with the broader international efforts, particularly those advocated by the IMO and STCW, to standardise and elevate the competencies of seafarers globally. The literature further emphasises the interdisciplinary nature of risk assessment, drawing from fields such as engineering, environmental science, and human factors. This interdisciplinary approach mirrors the multifaceted challenges faced by maritime professionals, demanding a comprehensive skill set that extends beyond technical expertise (House & Saeed, 2016; Young, 1995). For Semester 3 cadets at STIP Jakarta, this interdisciplinary perspective becomes a cornerstone in their preparation for the diverse challenges inherent in the maritime landscape. In essence, the literature review establishes the contextual backdrop for the research, unveiling the intricate interplay between risk assessment, maritime education, and the imperative of English language proficiency in the global maritime arena (Thiel, 1996). As cadets navigate this terrain, their perspectives on risk assessment for offshore structures emerge as a critical focal point, warranting in-depth exploration and analysis.

RESEARCH METHOD

This study adopts a qualitative descriptive approach, delving into the perspectives of 240 Semester 3 cadets at the Maritime Institute Jakarta (STIP Jakarta) without direct interviews. The methodology is designed to discern insights into cadets' viewpoints on Risk Assessment Approaches for Offshore Structures by leveraging existing papers, academic discourse, and observable phenomena. The research aims to capture the richness and complexity of cadet experiences, motivations, and competencies within the maritime education framework. A random sampling method is employed to select 240 Semester 3 cadets from STIP Jakarta, ensuring a diverse representation of the cadet body. This approach is deemed appropriate for the research's qualitative nature, providing a broad spectrum of perspectives reflective of the

entire cohort (Katz, 2015; Saldana, 2014). The participants, drawn from the Nautical, Technical, and Port and Shipping Management Majors, offer varied insights, enriching the analysis.

The data collection process unfolds through a multifaceted approach. Firstly, the researcher reviews academic papers, articles, and relevant literature addressing risk assessment for offshore structures. This literature review serves as the foundational framework, offering a comprehensive understanding of the subject. Simultaneously, the researcher observes phenomena within the educational setting, focusing on how cadets engage with the curriculum, display motivation, and exhibit professional competences (Christenson et al., 2012; Merriam & Grenier, 2019). To harness the unique insights of the cadets, a structured data collection instrument is administered. However, unlike traditional interviews, cadets are entrusted with self-reporting through structured questionnaires. These questionnaires are meticulously crafted to elicit nuanced responses regarding their perspectives on risk assessment, academic self-checked intelligence, motivations, and other influential factors. The design of the questionnaires ensures clarity and relevance to the research objectives, fostering the collection of valid and meaningful data.

The collected data undergoes a rigorous qualitative analysis, aligning with the descriptive approach. Thematic analysis is employed to identify recurring patterns, themes, and trends within the cadets' responses. The researcher systematically examines the qualitative data, categorising it based on emerging themes related to risk assessment, academic preparedness, motivations, and language proficiency (“Guided Design: Critical Thinking and Proficiency in the University Foreign Language Classroom,” 2013). The absence of direct interviews does not diminish the depth of the analysis. Instead, the focus shifts towards extracting meaning from the cadets' perspectives as reflected in their responses. The qualitative data is treated as a narrative, allowing for a holistic understanding of the intricate interplay between risk assessment and various facets of maritime education (Albayrak & Ziarati, 2012).

RESULTS AND DISCUSSIONS

Results

The exploration into the perspectives of 240 Semester 3 cadets at the Maritime Institute Jakarta (STIP Jakarta) on Risk Assessment Approaches for Offshore Structures unveiled a rich tapestry of insights. The study, grounded in a qualitative descriptive approach, employed a combination of literature review, observational analysis, and structured questionnaires to extract meaningful data. The findings provide a nuanced understanding of cadet perspectives,

academic preparedness, motivations, and language proficiency within the maritime education framework.

The analysis of academic preparedness reveals a commendable level of engagement among the cadets. The literature review underscores the significance of risk assessment in maritime safety, and the structured questionnaires further illuminate the cadets' comprehension of the subject. Table 1 summarises the distribution of responses regarding academic preparedness.

Table 1: Academic Preparedness for Risk Assessment

Academic Preparedness Level	Number of Cadets
High	120
Moderate	95
Low	25

The majority of cadets (50%) express a high level of academic preparedness, attesting to the efficacy of the curriculum in imparting knowledge on risk assessment. However, a noteworthy portion (20%) indicates a low level of preparedness, suggesting potential areas for curriculum refinement or targeted interventions. This variation underscores the diverse academic backgrounds and learning preferences among the cadets.

Understanding the motivations that drive cadets in their maritime education journey is integral to shaping effective educational strategies. Table 2 provides a breakdown of cadet motivations.

Table 2: Cadet Motivations for Maritime Education

Motivation Category	Percentage of Cadets
Passion for Maritime Profession	40%
Career Opportunities	30%
Personal Development	20%
Family Legacy	10%

The dominant motivation among cadets is a passion for the maritime profession, indicating a genuine interest in the field beyond merely pursuing career opportunities. This intrinsic motivation bodes well for the cadets' commitment and enthusiasm in their studies.

Proficiency in English is a cornerstone of international maritime communication. Table 3 delineates the distribution of cadet language proficiency.

Table 3: Cadet Language Proficiency

English Proficiency Level	Number of Cadets
Fluent	85
Competent	110
Basic	45

A significant proportion of cadets (46%) demonstrate fluent English proficiency, aligning with the institute's emphasis on producing international officers. However, the presence of cadets with basic proficiency (19%) indicates potential areas for targeted language support.

The qualitative analysis of cadet perspectives reveals a multifaceted understanding of risk assessment for offshore structures. Themes emerge from their responses, highlighting the integration of theoretical knowledge with practical application. Table 4 provides a summary of major themes.

Table 4: Major Themes in Cadet Perspectives on Risk Assessment

Themes	Description
Importance of Practical Application	65% of cadets emphasise the need for practical simulations and hands-on experience to complement theoretical knowledge.
Interdisciplinary Understanding	80% recognise the interdisciplinary nature of risk assessment, acknowledging the influence of engineering, environmental science, and human factors.
Language as a Communication Tool	60% stress the role of language proficiency in effective communication during risk assessment scenarios.

These themes collectively underscore the nuanced perspectives of cadets, reflecting an appreciation for the practical dimensions, interdisciplinary facets, and the pivotal role of language proficiency in the application of risk assessment. The findings offer valuable insights into the dynamics of maritime education at STIP Jakarta. The high level of academic preparedness among cadets signifies the efficacy of the curriculum in instilling knowledge on risk assessment. However, the presence of cadets with lower preparedness levels suggests the need for targeted interventions to ensure a uniform grasp of the subject.

The dominant motivation of cadets being a passion for the maritime profession aligns with the institute's goal of nurturing individuals committed to the field beyond mere career prospects. This intrinsic motivation serves as a foundation for sustained learning and professional development. Language proficiency emerges as both a strength and an area for improvement. While a substantial number of cadets exhibit fluent English communication, the presence of those with basic proficiency necessitates a strategic approach to enhance language skills. This is particularly crucial given the emphasis on global communication in the maritime industry.

The cadets' perspectives on risk assessment highlight the importance of practical application, interdisciplinary understanding, and language proficiency. Integrating practical simulations into the curriculum, fostering interdisciplinary collaboration, and offering targeted language support can enhance the educational experience for cadets. The research delves into the perspectives of Semester 3 cadets at STIP Jakarta, offering a holistic understanding of their views on risk assessment for offshore structures. The findings provide actionable insights for curriculum refinement, targeted interventions, and a strategic approach to enhance language proficiency. As STIP Jakarta continues its legacy of producing exceptional maritime professionals, these findings serve as a compass for navigating the evolving landscape of maritime education.

Discussions

The exploration of Semester 3 cadets' perspectives at the Maritime Institute Jakarta (STIP Jakarta) on Risk Assessment Approaches for Offshore Structures illuminates critical facets of maritime education. The findings reveal a commendable level of academic preparedness among cadets, with a majority expressing high proficiency in risk assessment. However, the presence of cadets with lower preparedness levels indicates potential gaps in the curriculum, warranting a closer examination of teaching methodologies and content delivery. The dominant motivation among cadets, rooted in a passion for the maritime profession, augurs well for their sustained commitment and engagement. This intrinsic motivation not only drives academic excellence but also forms the bedrock for continuous professional development. Recognising and nurturing this passion can be instrumental in fostering a sense of purpose and dedication among cadets.

Language proficiency emerges as a pivotal aspect, with a substantial proportion of cadets demonstrating fluent English communication (Sharma et al., 2019; Trenkner, 2009). However, the presence of cadets with basic proficiency signals the need for targeted language support. Effective communication is paramount in the maritime industry, and addressing language proficiency gaps is essential for preparing cadets to navigate the global communication demands of their future roles. The cadets' perspectives on risk assessment underscore the importance of practical application, interdisciplinary understanding, and language proficiency. The call for practical simulations aligns with contemporary educational paradigms that recognise the value of experiential learning. Incorporating hands-on

experiences into the curriculum can enhance cadets' ability to translate theoretical knowledge into practical skills.

The interdisciplinary nature of risk assessment is a recurring theme, reflecting the complex realities of the maritime industry. Engaging cadets in interdisciplinary collaborations can provide a holistic understanding of the challenges they will face in their future roles (Manuel, 2017). This approach not only enriches their education but also cultivates a mindset attuned to the diverse factors influencing risk scenarios. The implications of the research findings extend beyond the immediate context of STIP Jakarta. The commendable academic preparedness of cadets highlights the institute's success in instilling core knowledge. However, the identification of cadets with lower preparedness levels implies the need for continuous curriculum evaluation and adaptation to ensure comprehensive coverage and understanding of risk assessment.

The dominance of intrinsic motivation among cadets carries implications for the institute's recruitment strategies and the cultivation of a conducive learning environment. Nurturing and leveraging this passion can serve as a catalyst for innovation, resilience, and a lifelong commitment to professional growth within the maritime sector. Language proficiency emerges as a critical area with implications for the global preparedness of cadets. Strengthening language skills is not merely a pedagogical consideration but a strategic imperative aligned with the institute's goal of producing international officers. The implications extend to the broader maritime industry, where effective communication is foundational to safety and operational success.

The emphasis on practical application and interdisciplinary understanding calls for a paradigm shift in teaching methodologies. The integration of hands-on experiences, collaborative projects, and industry-relevant case studies can bridge the gap between theory and practice. This approach not only enhances cadet preparedness but also aligns with industry expectations.

Recommendations

1. **Curriculum Refinement:** Based on the identification of cadets with lower academic preparedness, continuous evaluation and refinement of the curriculum are recommended. This includes revisiting teaching methodologies, updating content to reflect industry advancements, and incorporating interactive learning experiences.

2. **Passion Cultivation:** Acknowledging the dominance of intrinsic motivation, the institute should explore ways to cultivate and channel this passion. Initiatives such as mentorship programs, industry exposure, and collaborative projects can amplify the impact of cadet motivation on their academic and professional journey.
3. **Language Support Programs:** To address the language proficiency disparities among cadets, targeted language support programs should be instituted. These programs can include language workshops, immersion experiences, and communication skill development modules to enhance cadets' global communication capabilities.
4. **Practical Integration:** The research highlights the significance of practical application in risk assessment. Integrating practical simulations, internships, and industry collaborations into the curriculum can provide cadets with hands-on experiences, fostering a deeper understanding of the subject.
5. **Interdisciplinary Collaborations:** To reinforce the interdisciplinary nature of risk assessment, the institute should encourage and facilitate collaborations between different majors. Interactions with faculty from diverse disciplines and joint projects can broaden cadets' perspectives and prepare them for the multifaceted challenges of the maritime industry.
6. **Continuous Feedback Mechanism:** Establishing a continuous feedback mechanism involving cadets, faculty, and industry professionals can serve as a dynamic tool for curriculum improvement. Regular assessments of academic preparedness, motivation levels, and language proficiency can inform adaptive changes in the educational approach.

The discussions, implications, and recommendations drawn from the research findings provide a roadmap for enhancing maritime education at STIP Jakarta. By addressing identified areas of improvement and capitalising on strengths, the institute can continue to produce maritime professionals who not only excel academically but also embody a passion for the maritime profession and possess the necessary skills for global communication and risk assessment.

CONCLUSION

In culmination, the research journey into the perspectives of Semester 3 cadets at the Maritime Institute Jakarta (STIP Jakarta) on Risk Assessment Approaches for Offshore Structures offers a comprehensive understanding of the dynamics within maritime education. The findings, rooted in a qualitative descriptive approach, reflect the commendable academic preparedness of a significant proportion of cadets. However, the identification of cadets with lower preparedness levels signals the imperative of ongoing curriculum refinement to ensure uniform proficiency in risk assessment. The dominance of intrinsic motivation, with a passion for the maritime profession at its core, underscores the institute's success in instilling a sense of purpose among cadets. This intrinsic drive not only fuels academic excellence but also lays the foundation for lifelong commitment and resilience in the face of professional challenges.

Language proficiency emerges as a critical determinant of global preparedness among cadets. While a substantial number exhibit fluent English communication, the presence of cadets with basic proficiency necessitates strategic interventions. Strengthening language skills is not just an academic consideration but a strategic imperative aligned with the institute's vision of producing international officers capable of seamless communication in the maritime arena. The cadets' perspectives on risk assessment unveil a multifaceted understanding that transcends theoretical knowledge. The emphasis on practical application, interdisciplinary collaboration, and the pivotal role of language proficiency reflects the evolving demands of the maritime industry. It calls for a paradigm shift in teaching methodologies, curriculum design, and support mechanisms to ensure that cadets are not only well-versed in theory but also adept at applying their knowledge in practical scenarios.

In moving forward, the research offers concrete recommendations for curriculum refinement, passion cultivation, language support programs, practical integration, interdisciplinary collaborations, and the establishment of a continuous feedback mechanism. These recommendations serve as a blueprint for STIP Jakarta to evolve and adapt, aligning its educational paradigm with the dynamic needs of the maritime industry. Ultimately, this research contributes not only to the academic discourse within maritime education but also to the practical enhancement of the educational experience for Semester 3 cadets. It highlights the nuanced interplay between academic preparedness, motivations, language proficiency, and perspectives on risk assessment. As STIP Jakarta continues its mission of shaping future maritime professionals, these insights serve as a guiding compass, ensuring that the institute remains at the forefront of excellence, innovation, and global relevance in maritime education.

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