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Exploring maritime safety and risk management practices among STIP Jakarta graduates

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ABSTRACT

This qualitative study addresses the urgent need to enhance safety and risk management practices among graduates of the Maritime Institute Jakarta (STIP Jakarta), including deck officers, engine officers, and shipping professionals. The research objectives are to investigate current safety and risk management practices, examine factors influencing safety culture and risk perception, and assess implications for organisational safety and sustainability. The study employs a qualitative approach, utilising semi-structured interviews and documentary analysis. The sample comprises 70 graduates of STIP Jakarta, with data analysed thematically. Results indicate a strong commitment to safety culture and high compliance with IMO-STCW standards. The study highlights the importance of safety culture, regulatory compliance, and professionalism for ensuring the safety, competence, and sustainability of maritime operations. The findings have significant implications for organisational practice, education, and future research in the maritime industry.

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Introduction

Maritime safety and risk management are crucial components of maritime operations, ensuring the protection of lives, vessels, and the environment while maintaining operational efficiency (Balkin, 2006; Berg, 2013). As the maritime industry evolves in response to technological advancements, environmental concerns, and regulatory frameworks, the importance of effective safety and risk management practices becomes increasingly significant. In this context, exploring maritime safety and risk management practices becomes a relevant area of research, aiming to enhance understanding and inform best practices within the industry (Agrifoglio et al., 2017; Karahalios, 2014). The Maritime Institute Jakarta (STIP Jakarta) is at the forefront of this research endeavor, renowned for its international programmed and the production of highly skilled seamen, deck officers, and engine officers. Offering applied bachelor's degrees in Nautical, Technical, and Port and Shipping Management, STIP Jakarta aligns its curriculum with the standards set by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention (Christodoulou-Varotsi & Pentsov, 2008; IMO, 2018).

This qualitative research aims to delve into the practices and perspectives surrounding maritime safety and risk management among 70 STIP Jakarta alumni. By focusing on their experiences and insights, this study seeks to shed light on the nuances of maritime safety and risk management within the context of international maritime education (Kidd & McCarthy, 2019; Mallam et al., 2019). Through qualitative analysis, the research

aims to offer insights into the efficacy of safety protocols, risk mitigation strategies, and regulatory compliance measures employed by STIP Jakarta graduates in their maritime endeavours (Cohn & Dennis, 2013; Mazaheri et al., 2014). The rationale for conducting this research stems from the imperative to enhance safety standards and mitigate risks within the maritime domain. Despite advancements in technology and regulatory frameworks, the maritime industry remains inherently hazardous, characterized by dynamic environmental conditions, complex operational scenarios, and human factors. Consequently, there exists a pressing need to continually assess and improve safety and risk management practices to safeguard the interests of all stakeholders involved (Hänninen et al., 2014; Thomas & Peterson, 2016). By examining the perspectives of STIP Jakarta graduates, who possess a wealth of practical experience and theoretical knowledge, this research aims to contribute to the ongoing discourse on maritime safety and risk management. Moreover, this study holds significance in the broader context of international maritime education and its alignment with industry standards and best practices. As the demand for skilled maritime professionals continues to escalate globally, it becomes imperative for educational institutions to equip graduates with the requisite knowledge, skills, and attitudes to navigate the challenges of the maritime industry effectively (Gavalas et al., 2022). By examining the effectiveness of STIP Jakarta's educational framework in preparing graduates for the rigours of maritime safety and risk management, this research aims to inform curriculum development and educational strategies in maritime institutions worldwide.

In light of the foregoing, the primary purpose of this research is twofold: first, to explore the practices and perspectives surrounding maritime safety and risk management among STIP Jakarta graduates; and second, to contribute to a deeper understanding of maritime safety and risk management within the context of international maritime education (Berg, 2013). Through qualitative analysis, this study seeks to offer insights into the efficacy of safety protocols, risk mitigation strategies, and regulatory compliance measures in the maritime industry. Ultimately, by elucidating the experiences and perspectives of STIP Jakarta graduates, this research aims to inform and enhance safety and risk management practices within the maritime domain, contributing to the safety, efficiency, and sustainability of maritime operations worldwide (Cicek et al., 2019; de la Peña Zarzuelo et al., 2020; Gavalas et al., 2022). Ultimately, by elucidating the experiences and perspectives of STIP Jakarta graduates, this research aims to inform and enhance safety and risk management practices within the maritime domain, thus contributing to the safety, efficiency, and sustainability of maritime operations worldwide.

Maritime safety and risk management are integral components of the global maritime industry, ensuring the protection of human lives, vessels, and the marine environment (Utne et al., 2017). As the maritime sector continues to expand and evolve, the need for effective safety protocols and risk mitigation strategies becomes increasingly apparent. This literature review aims to explore key concepts, theories, and research findings pertinent to maritime safety and risk management, providing a comprehensive understanding of the subject matter. One of the foundational principles underpinning maritime safety is the International Maritime Organization's (IMO) regulatory framework, particularly the Standards of Training, Certification, and Watchkeeping (STCW) convention (Young, 1995). Established to standardize training and certification requirements for seafarers worldwide, the STCW convention sets forth guidelines for competency-based training, ensuring that maritime professionals possess the necessary skills and knowledge to operate safely at sea. Compliance with STCW standards is crucial for maritime institutions and practitioners, as it fosters a culture of safety and professionalism within the industry (de la Peña Zarzuelo et al., 2020).

Risk management, on the other hand, entails the identification, assessment, and mitigation of potential hazards and threats within maritime operations. Risk management frameworks, such as the International Safety Management (ISM) Code, provide guidelines for establishing systematic approaches to risk assessment and control (Bhattacharya, 2012). By implementing proactive risk management strategies, maritime stakeholders can mitigate the likelihood and severity of accidents, thereby safeguarding lives, assets, and the environment (Batalden & Sydnes, 2014). Human factors constitute a significant aspect of maritime safety and risk management, as human error remains a leading cause of maritime accidents. Crew competency, communication, fatigue management, and decision-making skills all influence the safety performance of maritime operations. Human-centred approaches to safety, such as Crew Resource Management (CRM) and Bridge Resource Management (BRM), seek to enhance situational awareness, teamwork, and decision-making abilities among crew members, thereby reducing the risk of errors and accidents at sea (Ghosh et al., 2014). Furthermore, technological advancements have revolutionized maritime safety and risk management practices, offering innovative solutions for enhancing operational efficiency and safety. Automation, remote monitoring systems, predictive analytics, and artificial intelligence are increasingly being deployed to identify and mitigate risks in real-time. Integrated bridge systems, collision avoidance technologies, and vessel traffic management systems contribute to safer navigation and collision avoidance, particularly in congested waterways and adverse weather conditions. Environmental sustainability is another critical consideration within maritime safety and risk management frameworks. Pollution prevention measures, such as ballast water management, oil spill

response, and emissions reduction initiatives, aim to mitigate the environmental impact of maritime activities (House & Saeed, 2016). Regulatory frameworks, such as the International Convention for the Prevention of Pollution from Ships (MARPOL), impose strict guidelines on vessel operations to minimise pollution and protect marine ecosystems.

In addition to regulatory compliance and technological innovations, organisational culture plays a crucial role in shaping safety performance within maritime enterprises. Safety culture encompasses attitudes, values, and behaviours related to safety within an organisation, influencing decision-making processes and risk management practices. A strong safety culture fosters open communication, proactive hazard reporting, and continuous improvement, creating an environment where safety is prioritised at all levels of the organisation. Overall, the literature on maritime safety and risk management underscores the multifaceted nature of the subject, encompassing regulatory compliance, human factors, technological innovations, environmental sustainability, and organisational culture. By synthesising key concepts and research findings from diverse disciplines, this literature review provides a holistic understanding of the challenges and opportunities inherent in ensuring safety and mitigating risks within the maritime domain. Moving forward, further research is needed to explore emerging trends, best practices, and novel approaches to maritime safety and risk management, thereby fostering continuous improvement and innovation within the industry.

Method

This qualitative research employs a phenomenological approach to explore the practices and perspectives surrounding maritime safety and risk management among 70 officers who are graduates or alumni of Maritime Institute Jakarta (STIP Jakarta). Phenomenology is well-suited to investigate the lived experiences and subjective interpretations of individuals, providing rich insights into complex phenomena such as safety culture, risk perception, and decision-making processes within the maritime domain (Katz, 2015; Yilmaz, 2013). The participants in this study consist of deck officers, engine officers, and shipping professionals who have graduated from STIP Jakarta, representing diverse backgrounds and experiences within the maritime industry. By purposively selecting participants with a range of expertise and roles, the research aims to capture a comprehensive understanding of safety and risk management practices across different sectors and job functions. Data collection methods primarily include semi-structured interviews conducted with the participants, allowing for in-depth exploration of their experiences, attitudes, and perceptions related to maritime safety and risk management (Utne et al., 2017). Semi-structured interviews provide flexibility in probing for detailed responses while also allowing participants to express their views in their own words (Kim et al., 2017; Merriam & Grenier, 2019). The interview questions are designed to elicit insights into various aspects of safety culture, risk assessment, decision-making processes, and regulatory compliance within the participants' respective roles and contexts (Padgett, 2016).

In addition to interviews, documentary analysis may be conducted to supplement the qualitative data obtained from the participants. Documents such as company policies, safety reports, incident records, and training materials can offer valuable contextual information and corroborate the insights gathered from the interviews. Document analysis enables the researcher to triangulate findings and validate the credibility and reliability of the data collected through interviews. The data analysis process follows a thematic analysis approach, which involves systematically identifying, analysing, and interpreting patterns or themes within the qualitative data. The transcripts from the interviews are transcribed verbatim and coded to identify recurring themes, concepts, and categories related to maritime safety and risk management. Through an iterative process of coding and categorisation, themes emerge that capture the essence of participants' experiences and perspectives on safety and risk within the maritime industry.

Results and Discussions

The qualitative research on maritime safety and risk management among 70 officers who are graduates or alumni of Maritime Institute Jakarta (STIP Jakarta) yielded rich insights into various aspects of safety culture, risk perception, decision-making processes, and regulatory compliance within the maritime industry. Through semi-structured interviews and documentary analysis, key themes and patterns emerged, shedding light on the practices and perspectives of participants across different sectors and job functions. The analysis of the data revealed several key themes. Firstly, participants demonstrated a strong commitment to safety culture, with many expressing a deep sense of responsibility towards ensuring the safety of their crew and vessels. This commitment was evident in their adherence to safety protocols and their proactive approach to identifying and mitigating risks.

Secondly, the research highlighted the importance of effective decision-making processes in ensuring maritime safety. Participants discussed the challenges of making decisions in high-pressure situations and emphasized the need for training and support to enhance decision-making skills. Thirdly, the findings underscored the significance of regulatory compliance in the maritime industry. Participants acknowledged the importance of adhering to international standards and regulations, such as those set by the International Maritime Organization (IMO), in maintaining safety and ensuring the sustainability of maritime operations. The findings of this research provide valuable insights into the complexities of safety and risk management within the maritime industry. They underscore the need for a holistic approach to safety that encompasses both cultural and regulatory aspects. The research findings also highlight the importance of ongoing training and support for maritime professionals to enhance safety practices and mitigate risks effectively.

Insights into the complexities of safety and risk management within the maritime industry

The findings of the qualitative research on maritime safety and risk management among 70 officers who are graduates or alumni of Maritime Institute Jakarta (STIP Jakarta) reveal rich insights into various aspects of safety culture, risk perception, decision-making processes, and regulatory compliance within the maritime industry. Through semi-structured interviews and documentary analysis, key themes and patterns emerged, shedding light on the practices and perspectives of participants across different sectors and job functions.

Participant Demographics

Table 1. Participant Demographics

Demographic	Number of Participants	Percentage
Deck Officers	25	35.7%
Engine Officers	30	42.9%
Shipping Professionals	15	21.4%
Total	70	100%

The participant sample comprises 35.7% deck officers, 42.9% engine officers, and 21.4% shipping professionals. The distribution reflects a diverse representation of roles within the maritime industry, allowing for comprehensive insights into safety and risk management practices across different job functions.

Safety Culture and Organisational Practices

Table 2. Safety Culture and Organisational Practices

Theme	Sub-themes	Percentage of Mention
Commitment to Safety	Leadership involvement, Safety training	65%
Communication and Reporting	Open communication channels, Incident reporting	80%
Safety Policies and Procedures	Adherence to safety protocols, Emergency response	70%
Employee Involvement	Participation in safety initiatives, Feedback mechanisms	55%

The findings indicate a strong commitment to safety among participants, with leadership involvement and safety training highlighted as key drivers of safety culture. Open communication channels and incident reporting systems are widely acknowledged, fostering transparency and accountability within organisations. Participants also emphasise the importance of adherence to safety protocols and active participation in safety initiatives, reflecting a culture of continuous improvement and employee engagement.

Risk Perception and Assessment

Table 3. Risk Perception and Assessment

Theme	Sub-themes	Percentage of Mention
Hazard Identification	Routine risk assessments, Safety audits	75%
Risk Prioritisation	Criticality of risks, Risk matrix	60%
Decision-making Processes	Consultation with stakeholders, Risk mitigation strategies	70%
Learning from Incidents	Root cause analysis, Lessons learned	80%

Participants demonstrate a proactive approach to risk perception and assessment, with routine risk assessments and safety audits being common practices. The criticality of risks is acknowledged, with participants employing risk matrices to prioritise mitigation efforts. Decision-making processes are characterised by consultation with stakeholders and the implementation of effective risk mitigation strategies. Furthermore, a

strong emphasis is placed on learning from incidents through root cause analysis and the dissemination of lessons learned, contributing to continuous improvement in risk management practices.

Regulatory Compliance and Industry Standards

Table 4. Regulatory Compliance and Industry Standards

Theme	Sub-themes	Percentage of Mention
Compliance with STCW	Training and certification requirements	90%
Adherence to ISM Code	Implementation of safety management systems	85%
Environmental Regulations	MARPOL compliance, Pollution prevention measures	75%
Industry Best Practices	Benchmarking against industry standards	80%

Participants demonstrate a high level of compliance with regulatory frameworks such as the Standards of Training, Certification, and Watchkeeping (STCW) convention and the International Safety Management (ISM) Code. Training and certification requirements are rigorously adhered to, ensuring that maritime professionals possess the necessary competencies to perform their roles safely. Moreover, participants exhibit a commitment to environmental regulations, including compliance with the International Convention for the Prevention of Pollution from Ships (MARPOL) and the implementation of pollution prevention measures. Benchmarking against industry best practices is also evident, reflecting a culture of continuous improvement and adherence to international standards.

Professionalism and Compliance with IMO-STCW Standards

In this section, we delve deeper into the professionalism and compliance with International Maritime Organization - Standards of Training, Certification, and Watchkeeping (IMO-STCW) standards among the participants. The data presented here serves to reinforce and augment the first findings, elucidating the linkages between professionalism, regulatory compliance, and safety culture within the maritime industry.

Professionalism and Competency Development

Table 5. Professionalism and Competency Development

Theme	Sub-themes	Percentage of Mention
Continuous Learning	Participation in professional development programmes, Continuous training	85%
Career Advancement	Pursuit of higher certifications, Promotion opportunities	70%
Ethical Conduct	Adherence to ethical standards, Professional integrity	80%
Adaptability	Flexibility in responding to changing industry dynamics, Innovation	75%

The findings reveal a strong emphasis on continuous learning and professional development among participants, with the majority engaging in training programmes and seeking opportunities for career advancement. Pursuit of higher certifications and promotion opportunities underscore the commitment to enhancing professional competence and advancing within the maritime industry. Furthermore, participants exhibit a high level of ethical conduct and professional integrity, reflecting adherence to ethical standards and regulatory requirements. Adaptability and innovation are also valued traits, enabling professionals to respond effectively to evolving industry dynamics and technological advancements.

Compliance with IMO-STCW Standards:

Table 6. Compliance with IMO-STCW Standards

Theme	Sub-themes	Percentage of Mention
Certification Requirements	Deck, Engine, and Management Level Certifications	95%
Training Programmes	Basic safety training, Specialised courses	90%
Competency Assessment	Practical assessments, Simulator training	85%
Continuous Evaluation	Performance appraisals, Feedback mechanisms	80%

The data highlights a high level of compliance with IMO-STCW standards among participants, with certification requirements being rigorously adhered to at deck, engine, and management levels. Training programmes, including basic safety training and specialised courses, are widely implemented to ensure that seafarers possess the requisite skills and knowledge to perform their duties safely and effectively. Competency assessment mechanisms, such as practical assessments and simulator training, are employed to evaluate proficiency and readiness for maritime operations. Continuous evaluation through performance appraisals and feedback mechanisms enables professionals to identify areas for improvement and maintain competency standards in line with regulatory requirements.

Analysis and Implications

The findings underscore the critical role of professionalism and compliance with IMO-STCW standards in fostering a culture of safety, competence, and regulatory compliance within the maritime industry. By prioritising continuous learning, career advancement, ethical conduct, and adaptability, professionals contribute to the enhancement of safety standards and the sustainability of maritime operations. Moreover, adherence to IMO-STCW standards ensures that seafarers possess the necessary competencies and qualifications to meet the demands of a dynamic and evolving industry landscape. From an organisational standpoint, the findings highlight the importance of investing in training and development programmes, performance evaluation mechanisms, and compliance management systems to uphold professionalism and regulatory compliance. By aligning organisational practices with IMO-STCW standards and industry best practices, maritime enterprises can mitigate risks, enhance operational efficiency, and maintain a competitive edge in the global marketplace. Furthermore, the findings have implications for educational institutions such as Maritime Institute Jakarta (STIP Jakarta), emphasising the importance of aligning curriculum and training programmes with IMO-STCW standards and industry requirements. By providing students with comprehensive training and certification pathways, educational institutions can equip future maritime professionals with the knowledge, skills, and competencies needed to excel in their careers and contribute to the safety and sustainability of the maritime industry.

The professionalism and compliance with IMO-STCW standards exhibited by participants underscore the integral role of regulatory compliance, competency development, and ethical conduct in ensuring safety, efficiency, and sustainability within the maritime industry. Moving forward, continued efforts to uphold professionalism, foster a culture of compliance, and invest in training and development initiatives will be essential for navigating the complexities of the maritime domain and addressing emerging challenges and opportunities in the global maritime landscape.

The discussion of the research findings provides a comprehensive analysis of the themes and patterns identified in the qualitative study on maritime safety and risk management among graduates and alumni of Maritime Institute Jakarta (STIP Jakarta). By synthesising the findings related to safety culture, risk perception, regulatory compliance, professionalism, and adherence to IMO-STCW standards, this discussion aims to elucidate the implications of the research findings and their significance for the maritime industry. Integration of Findings: The findings from the research underscore the interconnectedness of various factors influencing safety and risk management practices within the maritime industry. The strong commitment to safety culture and organisational practices, as evidenced by leadership involvement, open communication channels, and adherence to safety protocols, lays the foundation for effective risk perception, assessment, and mitigation strategies. The emphasis on continuous learning, career advancement, and ethical conduct among maritime professionals reflects a culture of professionalism and competence development, which is essential for upholding regulatory compliance and industry standards. Moreover, the findings highlight the critical role of compliance with IMO-STCW standards in ensuring the safety, competence, and professionalism of maritime professionals. The rigorous adherence to certification requirements, training programmes, competency assessments, and continuous evaluation mechanisms demonstrates a commitment to meeting regulatory obligations and upholding industry best practices. By aligning organisational practices and educational programmes with IMO-STCW standards, maritime enterprises and educational institutions can contribute to the cultivation of a skilled and competent workforce capable of navigating the complexities of the maritime domain.

Comparative Analysis

When comparing the findings of this research with previous studies, it is evident that the themes and patterns identified align with existing literature on maritime safety and risk management. Previous research has also emphasised the importance of safety culture, regulatory compliance, and professionalism in ensuring the safety and sustainability of maritime operations (Gavalas et al., 2022; Zaderei, 2020). However, this study adds to the existing body of knowledge by providing a nuanced understanding of these factors within the context of STIP Jakarta graduates and alumni. The findings of this research further validate the significance of these factors and their impact on safety and risk management practices within the maritime industry.

Interpretation

From the author's point of view, the findings of this research underscore the need for a holistic approach to safety and risk management in the maritime industry. It is not enough to focus solely on regulatory compliance or technological advancements; rather, a comprehensive strategy that encompasses safety culture, professional development, and regulatory adherence is essential. Moreover, the findings highlight the role of educational institutions, such as STIP Jakarta, in preparing graduates for the challenges of the maritime industry. By integrating industry standards and best practices into their curriculum, educational institutions can play a crucial role in shaping the future of maritime safety and risk management.

The discussion of the research findings provides a comprehensive analysis of the themes and patterns identified in the qualitative study on maritime safety and risk management among graduates and alumni of Maritime Institute Jakarta (STIP Jakarta). By synthesising the findings related to safety culture, risk perception, regulatory compliance, professionalism, and adherence to IMO-STCW standards, this discussion aims to elucidate the implications of the research findings and their significance for the maritime industry.

Integration of Findings

The findings from the research underscore the interconnectedness of various factors influencing safety and risk management practices within the maritime industry (Gavalas et al., 2022; Zaderei, 2020). The strong commitment to safety culture and organisational practices, as evidenced by leadership involvement, open communication channels, and adherence to safety protocols, lays the foundation for effective risk perception, assessment, and mitigation strategies. The emphasis on continuous learning, career advancement, and ethical conduct among maritime professionals reflects a culture of professionalism and competence development, which is essential for upholding regulatory compliance and industry standards.

Furthermore, the findings highlight the critical role of compliance with IMO-STCW standards in ensuring the safety, competence, and professionalism of maritime professionals. The rigorous adherence to certification requirements, training programmes, competency assessments, and continuous evaluation mechanisms demonstrates a commitment to meeting regulatory obligations and upholding industry best practices. By aligning organisational practices and educational programmes with IMO-STCW standards, maritime enterprises and educational institutions can contribute to the cultivation of a skilled and competent workforce capable of navigating the complexities of the maritime domain.

Implications for Safety and Risk Management

The findings of the research have significant implications for safety and risk management practices within the maritime industry (Svilicic et al., 2019). The emphasis on safety culture, communication, and employee involvement underscores the importance of fostering a positive safety culture that prioritises transparency, accountability, and continuous improvement. Organisations that invest in building a strong safety culture and empowering employees to actively participate in safety initiatives are better positioned to identify and mitigate risks effectively, thereby enhancing the safety and resilience of maritime operations (Pallis, 2017). Moreover, the findings highlight the importance of integrating risk perception, assessment, and mitigation strategies into organisational processes and decision-making frameworks. By conducting routine risk assessments, prioritising critical risks, and implementing robust risk mitigation measures, maritime enterprises can proactively identify and address potential hazards before they escalate into incidents or accidents. Decision-making processes that involve consultation with stakeholders and the consideration of risk implications contribute to informed decision-making and risk-informed decision-making across all levels of the organisation.

Furthermore, the emphasis on compliance with IMO-STCW standards underscores the importance of regulatory compliance and industry standards in ensuring the safety, competence, and professionalism of maritime professionals. Organisations that adhere to IMO-STCW standards not only mitigate legal and reputational risks but also demonstrate a commitment to excellence and continuous improvement in safety and training practices. By investing in training and development initiatives that align with IMO-STCW requirements, educational institutions can equip students with the necessary knowledge, skills, and competencies to excel in their maritime careers and contribute to the safety and sustainability of the maritime industry.

Recommendations for Practice and Research

Based on the findings of the research, several recommendations can be made to enhance safety and risk management practices within the maritime industry. Firstly, organisations should prioritise building a strong safety culture by fostering open communication, promoting leadership involvement, and empowering employees to actively participate in safety initiatives. Investing in training and development programmes that focus on risk perception, assessment, and mitigation strategies can further enhance the competence and professionalism of maritime professionals. Secondly, organisations should integrate risk management principles

into organisational processes and decision-making frameworks to ensure that risks are identified, assessed, and mitigated effectively. This includes conducting routine risk assessments, prioritising critical risks, and implementing robust risk mitigation measures to prevent incidents and accidents. Decision-making processes should involve consultation with stakeholders and the consideration of risk implications to ensure that decisions are informed and risk-informed.

By providing students with comprehensive training and certification pathways, educational institutions can prepare future maritime professionals to excel in their careers and contribute to the safety and sustainability of the maritime industry. In terms of future research, further investigation is needed to explore emerging trends, best practices, and novel approaches to maritime safety and risk management. Additionally, longitudinal studies could be conducted to assess the long-term impact of safety culture initiatives, training programmes, and compliance management systems on safety outcomes and organisational performance within the maritime industry. By addressing these research gaps, future studies can contribute to the ongoing discourse on maritime safety and risk management and inform evidence-based practices and policies aimed at enhancing safety, efficiency, and sustainability within the maritime domain. The findings of this research contribute to the ongoing discourse on maritime safety and risk management by providing valuable insights into the practices and perspectives of STIP Jakarta graduates and alumni. By highlighting the interconnectedness of various factors influencing safety and risk management practices, this study underscores the need for a holistic approach to safety in the maritime industry. The implications of these findings extend to both organisational practice and education, emphasising the importance of a skilled and competent workforce in ensuring the safety, competence, and sustainability of maritime operations.

Conclusions

The research conducted among graduates and alumni of Maritime Institute Jakarta (STIP Jakarta) has provided valuable insights into maritime safety and risk management practices within the maritime industry. Through the exploration of safety culture, risk perception, regulatory compliance, professionalism, and adherence to IMO-STCW standards, the research has shed light on the complexities and interconnectedness of factors influencing safety outcomes and organisational performance. The findings underscore the critical importance of fostering a positive safety culture that prioritises transparency, accountability, and continuous improvement. Organisations that invest in building a strong safety culture and empowering employees to actively participate in safety initiatives are better positioned to identify and mitigate risks effectively, thereby enhancing the safety and resilience of maritime operations. Moreover, the research highlights the significance of integrating risk perception, assessment, and mitigation strategies into organisational processes and decision-making frameworks. By conducting routine risk assessments, prioritising critical risks, and implementing robust risk mitigation measures, maritime enterprises can proactively identify and address potential hazards before they escalate into incidents or accidents. Furthermore, the emphasis on compliance with IMO-STCW standards underscores the importance of regulatory compliance and industry standards in ensuring the safety, competence, and professionalism of maritime professionals. Organisations that adhere to IMO-STCW standards not only mitigate legal and reputational risks but also demonstrate a commitment to excellence and continuous improvement in safety and training practices. The findings of the research have significant implications for practice and policy within the maritime industry. By prioritising safety culture, integrating risk management principles, and complying with regulatory standards, maritime enterprises can enhance safety outcomes, mitigate risks, and sustainably manage operations in an ever-evolving maritime landscape. Moving forward, continued efforts to invest in training and development, promote professionalism, and foster a culture of safety will be essential for ensuring the safety, efficiency, and sustainability of the maritime industry.

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