



Contents lists available at [Journal IICET](https://journal.iicet.org)  
**JPPi (Jurnal Penelitian Pendidikan Indonesia)**  
ISSN: 2502-8103 (Print) ISSN: 2477-8524 (Electronic)  
Journal homepage: <https://jurnal.iicet.org/index.php/jppi>



## Alignment of nautical studies at STIP Jakarta with IMO-STCW standards: a graduate perspective

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### Article Info

#### Article history:

Received Jan 09<sup>th</sup>, 2024  
Revised Feb 18<sup>th</sup>, 2024  
Accepted Mar 16<sup>th</sup>, 2024

#### Keyword:

Nautical studies,  
IMO-STCW standards,  
Nautical management,  
Qualitative research

### ABSTRACT

This research contributes to the existing literature by providing empirical insights into English literacy proficiency among maritime graduates in Indonesia, particularly from STIP Jakarta. By focusing on the perspectives of graduates, the study offers a nuanced understanding of the challenges and opportunities in English language education within the maritime context. The findings have implications for curriculum development, teaching methodologies, and policy-making in maritime education and training. The study concludes with recommendations for enhancing English literacy education at STIP Jakarta and other maritime institutions, including the integration of language skills into technical courses, the use of authentic materials, and the provision of language support services for students. Overall, this research highlights the importance of English literacy in preparing maritime professionals for global communication and collaboration in the maritime industry.



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## Introduction

The maritime industry serves as a vital component of global trade and transportation, facilitating the movement of goods and people across the world's oceans. Nautical studies management plays a crucial role in ensuring the seamless operation of vessels and the safety of maritime navigation within this intricate ecosystem. Understanding the dynamics of nautical studies management is therefore essential for educational institutions, industry professionals, and policymakers. This research critically analyzes the management of nautical studies, drawing insights from the experiences and perspectives of graduates from the Maritime Institute Jakarta (STIP Jakarta). Maritime Institute Jakarta (STIP Jakarta) holds a distinguished position in the maritime education landscape, renowned for its rigorous academic programmes and its contribution to producing highly skilled seafarers (House & Saeed, 2016; Sharma et al., 2019). Offering applied bachelor's degrees in Nautical, Technical, and Port and Shipping Management majors, STIP Jakarta is a beacon of excellence in maritime education. The institution's commitment to international programming aligns with the standards set forth by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention, equipping graduates with the necessary knowledge and skills for global maritime industry challenges.

This research aims to shed light on the management of nautical studies, focusing on the perspectives of 70 graduates from STIP Jakarta. By adopting a qualitative research approach and employing descriptive analysis

techniques, this study seeks to delve into the nuanced intricacies of nautical studies management as perceived by industry professionals. Through their firsthand experiences and insights, these graduates offer a unique vantage point from which to understand the challenges and opportunities inherent in the field of maritime education and training. The purpose of this research is multifaceted. Firstly, it aims to contribute to the existing body of knowledge surrounding nautical studies management, providing valuable insights that can inform educational curricula, training programs, and industry practices. By critically examining the perspectives of graduates from STIP Jakarta, this research seeks to identify key areas for improvement and innovation within maritime education and training (Albayrak & Ziarati, 2012; Edirisinghe et al., 2016; Moodie, 2002). Moreover, by situating the findings within the broader context of international maritime education standards, this research aims to elucidate the ways in which institutions like STIP Jakarta can better align their programs with global best practices. Furthermore, this research holds implications for industry stakeholders and policymakers involved in shaping the future of the maritime industry. By gaining a deeper understanding of the management of nautical studies, stakeholders can work collaboratively to address the challenges facing maritime education and training (Kidd & McCarthy, 2019; Manuel, 2017).

This may involve implementing reforms, investing in infrastructure and resources, and fostering partnerships between educational institutions and industry players. Ultimately, the goal is to ensure that future generations of maritime professionals are equipped with the knowledge, skills, and competencies needed to thrive in an ever-evolving industry landscape (Bankole et al., 2017; Comtois & Slack, 2017). This research sets out to explore the management of nautical studies through the lens of graduates from Maritime Institute Jakarta (STIP Jakarta). By leveraging qualitative research methods and drawing on the insights of industry professionals, this study seeks to generate valuable knowledge that can inform both academic discourse and practical initiatives within the maritime industry. Through its rigorous analysis and critical examination of key issues, this research aims to contribute to the ongoing evolution of maritime education and training, ultimately striving towards a safer, more efficient, and more sustainable maritime future.

The management of nautical studies within the maritime education landscape is a topic of significant scholarly interest and practical importance. As the backbone of the global shipping industry, nautical studies management plays a critical role in ensuring the safety, efficiency, and sustainability of maritime operations (Edirisinghe et al., 2016; Ferritto, 2016). In this literature review, we delve into key themes and insights surrounding nautical studies management, exploring relevant research and theoretical frameworks to provide a comprehensive understanding of the subject. At its core, nautical studies management encompasses a wide array of disciplines and functions, ranging from navigation and seamanship to vessel operations and safety protocols. Within the context of maritime education, effective management of nautical studies entails the design, implementation, and evaluation of educational programmes that equip students with the requisite knowledge, skills, and competencies to excel in their roles as seafarers and maritime professionals (Albayrak & Ziarati, 2012; Kidd & McCarthy, 2019). Central to this endeavour is the alignment of educational curricula with international standards and best practices, as stipulated by regulatory bodies such as the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention.

A key consideration in the management of nautical studies is the evolving nature of the maritime industry and the corresponding demands placed on seafarers and maritime professionals. As technological advancements and regulatory changes continue to reshape the maritime landscape, educational institutions face the challenge of ensuring that their programmes remain relevant and up-to-date (Ilter & Karacar, 2020; Takacs et al., 2015). This necessitates a proactive approach to curriculum development and instructional design, incorporating emerging trends and industry developments into the fabric of nautical education (Young, 1995). Furthermore, effective management of nautical studies requires a nuanced understanding of the needs and perspectives of students, faculty, industry stakeholders, and regulatory bodies. Research indicates that successful maritime education programmes are characterised by close collaboration between educational institutions and industry partners, facilitating the exchange of knowledge, expertise, and resources. By engaging in meaningful dialogue and partnerships, educational institutions can ensure that their programmes are aligned with industry needs and expectations, thus enhancing the employability and competitiveness of their graduates. Moreover, the management of nautical studies extends beyond the confines of the classroom, encompassing practical training, simulation exercises, and experiential learning opportunities. Hands-on experience plays a crucial role in the development of maritime professionals, allowing students to apply theoretical knowledge in real-world scenarios and hone their skills under the guidance of experienced mentors (Franceschi, 2014; Mankabady, 1986). As such, educational institutions must invest in state-of-the-art facilities, simulators, and training vessels to provide students with a comprehensive learning experience that mirrors the challenges and complexities of maritime operations.

In addition to technical proficiency, effective nautical studies management also emphasises the importance of soft skills such as leadership, communication, and decision-making. Research suggests that successful seafarers possess a diverse skill set that extends beyond technical expertise, enabling them to navigate complex interpersonal dynamics, communicate effectively with multicultural crews, and make sound decisions in high-pressure situations. Educational programmes that incorporate opportunities for the development of these soft skills are therefore essential in preparing students for the rigours of maritime life. Furthermore, the global nature of the maritime industry underscores the importance of internationalisation in nautical studies management. As shipping routes span across continents and cultural boundaries, maritime professionals must possess a global mindset and an appreciation for cultural diversity (Bergheim et al., 2015; de la Peña Zarzuelo et al., 2020). Educational institutions that embrace internationalisation initiatives, such as student exchange programmes, international internships, and collaborative research projects, not only enrich the educational experience but also foster a sense of global citizenship among students. The management of nautical studies is a multifaceted endeavour that encompasses curriculum development, industry collaboration, practical training, soft skills development, and internationalisation. By exploring these key themes and insights, this literature review provides a solid foundation for understanding the complexities and challenges inherent in nautical studies management (Jeronen, 2020). Moving forward, educational institutions, industry stakeholders, and policymakers must work collaboratively to address these challenges and ensure that maritime education remains relevant, responsive, and resilient in the face of a rapidly changing maritime landscape.

## Method

This research adopts a qualitative approach to explore the management of nautical studies, specifically focusing on the perspectives of 70 officers who are graduates or alumni of Maritime Institute Jakarta (STIP Jakarta). Qualitative research is particularly well-suited for this study as it allows for an in-depth exploration of individuals' experiences, perceptions, and insights, thereby providing a rich and nuanced understanding of the research topic (Albayrak & Ziarati, 2012; Yilmaz, 2013). The sample for this study consists of 70 officers who have graduated from STIP Jakarta and are currently employed in various capacities within the maritime industry. These officers include deck officers, engine officers, and shipping professionals, reflecting the diverse range of roles and responsibilities within the maritime sector. By purposively selecting participants who have firsthand experience with nautical studies and maritime education at STIP Jakarta, this research aims to capture a comprehensive spectrum of perspectives and insights. Data collection for this study is primarily conducted through semi-structured interviews with the participating officers (Creswell & Clark, 2011; Saldana, 2014). Semi-structured interviews offer flexibility and allow for probing and clarification of responses, enabling researchers to delve deeper into participants' experiences and perspectives (Brenker et al., 2017). The interview protocol is designed to elicit information on various aspects of nautical studies management, including curriculum content, instructional methods, practical training, industry relevance, and career outcomes.

In addition to interviews, this research also utilises document analysis to complement and triangulate the data obtained from interviews. Documents such as course syllabi, training manuals, and institutional reports provide valuable insights into the formal curriculum and educational practices at STIP Jakarta. By analysing these documents, researchers can gain a deeper understanding of the institutional context and the ways in which nautical studies are structured and delivered within the academic programme. The data analysis process for this study follows a thematic analysis approach, whereby patterns, themes, and insights are identified and interpreted from the qualitative data (Darlington & Scott, 2020; Knies, 2019). The interviews and document analysis are transcribed and coded to identify recurring themes and patterns related to nautical studies management. These themes are then organised into meaningful categories and subcategories, allowing researchers to explore the complexities and nuances of the research topic in a systematic manner (Saldana, 2014; Thanh & Thanh, 2015; Willig, 2014). Throughout the data analysis process, researchers employ strategies to enhance rigour and validity, including intercoder reliability checks, member checking, and peer debriefing (Yilmaz, 2013). Intercoder reliability checks involve multiple researchers independently coding a subset of the data and comparing their results to ensure consistency and reliability in the coding process. Member checking involves sharing preliminary findings with participants to verify the accuracy and validity of the interpretations. Peer debriefing involves seeking input and feedback from colleagues and experts in the field to enhance the credibility and trustworthiness of the research findings.

## Results and Discussions

### *Management of nautical studies among graduates*

This section presents the findings of the qualitative research conducted on the management of nautical studies among graduates of Maritime Institute Jakarta (STIP Jakarta). The research involved interviewing 70 officers, including deck officers, engine officers, and shipping professionals, who are alumni of STIP Jakarta. The analysis of the data revealed several key themes and insights regarding the curriculum content, instructional methods, practical training, industry relevance, and career outcomes of nautical studies at STIP Jakarta.

**Table 1.** Participants' Demographic Information

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

The table above illustrates the demographic distribution of the participants included in the research. Among the 70 participants, 42.9% were deck officers, 35.7% were engine officers, and 21.4% were shipping professionals. This diverse representation ensures a comprehensive understanding of the management of nautical studies from various perspectives within the maritime industry.

**Table 2.** Participants' Perceptions of Curriculum Content

Themes	Deck Officers (%)	Engine Officers (%)	Shipping Professionals (%)
Relevance of Subjects	80	76	68
Practical Application of Knowledge	75	72	65
Integration of Industry Trends	68	64	60
Overall Satisfaction with Curriculum	85	82	75

The table above presents participants' perceptions of the curriculum content at STIP Jakarta. The findings indicate a high level of satisfaction across all participant groups, with deck officers expressing the highest satisfaction levels (85%), followed by engine officers (82%) and shipping professionals (75%). The majority of participants agreed that the subjects taught were relevant to their roles (deck officers: 80%, engine officers: 76%, shipping professionals: 68%) and facilitated practical application of knowledge (deck officers: 75%, engine officers: 72%, shipping professionals: 65%). However, there were slightly lower percentages regarding the integration of industry trends, suggesting potential areas for improvement in curriculum development.

**Table 3.** Effectiveness of Instructional Methods

Instructional Methods	Deck Officers (%)	Engine Officers (%)	Shipping Professionals (%)
Lectures	60	55	50
Practical Training	80	78	72
Simulations and Exercises	75	70	65
Guest Lectures	65	60	55

The table above outlines the effectiveness of instructional methods as perceived by the participants. Practical training received the highest ratings across all participant groups, with 80% of deck officers, 78% of engine officers, and 72% of shipping professionals indicating its effectiveness. Lectures were considered less effective, with only 60% of deck officers, 55% of engine officers, and 50% of shipping professionals expressing satisfaction. Simulations and exercises were rated positively by 75% of deck officers, 70% of engine officers, and 65% of shipping professionals, highlighting their importance in facilitating hands-on learning experiences.

**Table 4.** Industry Relevance and Career Outcomes

Themes	Deck Officers (%)	Engine Officers (%)	Shipping Professionals (%)
Preparation for Industry Roles	85	80	75
Career Advancement Opportunities	70	68	62
Employability	78	75	70
Satisfaction with Career Trajectory	82	78	72

The table above summarises participants' perceptions of industry relevance and career outcomes resulting from their education at STIP Jakarta. The findings indicate high levels of satisfaction with the preparation for industry roles across all participant groups (deck officers: 85%, engine officers: 80%, shipping professionals: 75%). Additionally, the majority of participants expressed satisfaction with career advancement opportunities (deck officers: 70%, engine officers: 68%, shipping professionals: 62%) and employability (deck officers: 78%, engine officers: 75%, shipping professionals: 70%). Overall, participants reported a high level of satisfaction with their career trajectory, with deck officers expressing the highest satisfaction levels (82%), followed by engine officers (78%) and shipping professionals (72%).

In summary, the findings of this research provide valuable insights into the management of nautical studies at Maritime Institute Jakarta (STIP Jakarta) from the perspectives of graduates and alumni. The data reveal high levels of satisfaction with curriculum content, instructional methods, industry relevance, and career outcomes among participants, underscoring the effectiveness of the educational programmes offered by STIP Jakarta in preparing maritime professionals for successful careers in the industry.

#### ***Alignment with IMO-STCW Standards***

This section presents the second findings of the research, which focuses on the alignment of the nautical studies management at Maritime Institute Jakarta (STIP Jakarta) with the standards set forth by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention. The analysis examines the extent to which the educational programmes at STIP Jakarta meet the requirements and expectations outlined by the IMO-STCW standards, thus ensuring the professionalism and competence of maritime professionals.

**Table 5.** Alignment with IMO-STCW Standards

<b>Themes</b>	<b>Deck Officers (%)</b>	<b>Engine Officers (%)</b>	<b>Shipping Professionals (%)</b>
Familiarity with IMO-STCW Requirements	85	80	75
Integration of IMO-STCW Standards	75	70	65
Impact on Professionalism	80	75	70
Contribution to Safety and Compliance	82	78	72

The table above illustrates participants' perceptions of the alignment of nautical studies management at STIP Jakarta with the IMO-STCW standards. The findings indicate a high level of familiarity with IMO-STCW requirements across all participant groups, with 85% of deck officers, 80% of engine officers, and 75% of shipping professionals indicating their awareness of these standards. Moreover, a majority of participants expressed satisfaction with the integration of IMO-STCW standards into the curriculum (deck officers: 75%, engine officers: 70%, shipping professionals: 65%), highlighting the institution's commitment to meeting international benchmarks for maritime education and training. Furthermore, participants recognised the positive impact of IMO-STCW standards on their professionalism, with 80% of deck officers, 75% of engine officers, and 70% of shipping professionals attributing their professional development to the adherence to these standards. Additionally, a significant proportion of participants acknowledged the contribution of IMO-STCW standards to safety and compliance within the maritime industry, with 82% of deck officers, 78% of engine officers, and 72% of shipping professionals recognising the importance of these standards in ensuring safe and compliant maritime operations.

**Analysis:** The findings of this research indicate a strong alignment between the management of nautical studies at STIP Jakarta and the standards set forth by the IMO-STCW convention. Participants demonstrated a high level of familiarity with IMO-STCW requirements and expressed satisfaction with the integration of these standards into the curriculum. This alignment not only ensures the professionalism and competence of maritime professionals but also contributes to safety and compliance within the maritime industry. Moreover, the recognition of the positive impact of IMO-STCW standards on professionalism underscores the importance of adhering to international benchmarks in maritime education and training (Hasse, 2014; Joshi et al., 2015; Llosa, 2016). By equipping students with the necessary knowledge, skills, and competencies outlined by the IMO-STCW standards, STIP Jakarta plays a crucial role in preparing maritime professionals for successful careers in the industry. Additionally, the emphasis on safety and compliance highlights the broader societal benefits of adhering to international standards, as it contributes to the overall safety and security of maritime operations. The findings of this research provide empirical evidence to support the effectiveness and professionalism of nautical studies management at STIP Jakarta in meeting the standards set forth by the IMO-STCW convention. By aligning with these international benchmarks, STIP Jakarta demonstrates its

commitment to excellence in maritime education and training, thus ensuring the continued success and competitiveness of its graduates in the global maritime industry.

The findings of this research provide valuable insights into the management of nautical studies at Maritime Institute Jakarta (STIP Jakarta) from the perspectives of graduates and alumni, as well as the alignment of these programmes with the standards set forth by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention. This discussion will analyse and contextualise these findings, exploring their implications for maritime education and training, professional development, and industry standards (Berg, 2013; House & Saeed, 2016; Young, 1995).

**Alignment with IMO-STCW Standards:** The findings indicate a strong alignment between the management of nautical studies at STIP Jakarta and the standards outlined by the IMO-STCW convention. Participants demonstrated a high level of familiarity with IMO-STCW requirements and expressed satisfaction with the integration of these standards into the curriculum. This alignment is critical as it ensures that graduates of STIP Jakarta are equipped with the necessary knowledge, skills, and competencies to meet international standards and regulations in the maritime industry (Zaderei, 2020). The recognition of the positive impact of IMO-STCW standards on professionalism underscores the importance of adhering to international benchmarks in maritime education and training (Chen et al., 2017; Kadhm, 2021). By aligning with these standards, STIP Jakarta not only prepares its graduates for successful careers in the maritime industry but also contributes to safety and compliance within the sector. The emphasis on safety and compliance highlights the broader societal benefits of adhering to international standards, as it enhances the overall safety and security of maritime operations.

Moreover, the integration of IMO-STCW standards into the curriculum ensures that graduates are well-prepared to navigate the complexities of the global maritime industry. The knowledge and skills acquired through adherence to these standards enable graduates to adapt to changing industry dynamics, technological advancements, and regulatory requirements. This adaptability is crucial in an industry that is constantly evolving and requires professionals to stay abreast of emerging trends and best practices.

**Curriculum Content and Instructional Methods:** The findings regarding curriculum content and instructional methods at STIP Jakarta highlight several areas of strength as well as opportunities for improvement. Participants expressed overall satisfaction with the relevance of subjects taught and the practical application of knowledge, indicating that the curriculum effectively prepares them for their roles in the maritime industry. However, there were slightly lower percentages regarding the integration of industry trends, suggesting potential areas for enhancement in curriculum development (Khan, 2020; Norris, 2021). Practical training emerged as a key strength of the educational programmes at STIP Jakarta, receiving high ratings across all participant groups. This hands-on learning experience is essential in bridging the gap between theoretical knowledge and practical application, allowing students to develop the skills and competencies needed to excel in their roles as maritime professionals. The effectiveness of practical training underscores the importance of investing in state-of-the-art facilities, simulators, and training vessels to provide students with a comprehensive learning experience. Conversely, lectures were considered less effective compared to practical training, indicating a potential need for diversification in instructional methods. While lectures serve as a valuable means of delivering theoretical content, they may not always facilitate active engagement and hands-on learning. As such, educational institutions may consider incorporating alternative instructional methods such as case studies, group discussions, and interactive simulations to enhance student learning and engagement.

**Professionalism and Career Outcomes:** The findings regarding professionalism and career outcomes highlight the positive impact of nautical studies management at STIP Jakarta on the professional development and success of graduates. Participants expressed high levels of satisfaction with the preparation for industry roles, career advancement opportunities, and employability resulting from their education at STIP Jakarta. This indicates that the educational programmes offered by STIP Jakarta effectively equip graduates with the knowledge, skills, and competencies needed to succeed in the maritime industry. Moreover, the recognition of the contribution of IMO-STCW standards to professionalism underscores the importance of adhering to international benchmarks in ensuring the competence and professionalism of maritime professionals. By aligning with these standards, STIP Jakarta enhances the credibility and marketability of its graduates, thus increasing their opportunities for career advancement and success in the industry. Additionally, the emphasis on safety and compliance highlights the role of educational institutions in fostering a culture of safety and responsibility among maritime professionals.

The findings of this research provide empirical evidence to support the effectiveness and professionalism of nautical studies management at Maritime Institute Jakarta (STIP Jakarta) in meeting international standards

and regulations set forth by the IMO-STCW convention (Balkin, 2006; IMO, 2018). By aligning with these standards and integrating practical training into the curriculum, STIP Jakarta ensures that graduates are well-prepared to navigate the complexities of the global maritime industry and contribute to safety and compliance within the sector. Moving forward, educational institutions, industry stakeholders, and policymakers must continue to collaborate to enhance the quality and relevance of maritime education and training, thus ensuring the continued success and competitiveness of maritime professionals in the global market (Dyagileva et al., 2020).

## Conclusions

This research provides valuable insights into the management of nautical studies at Maritime Institute Jakarta (STIP Jakarta) and its alignment with the standards set forth by the International Maritime Organization (IMO) and the Standards of Training, Certification, and Watchkeeping (STCW) convention. The findings highlight the effectiveness and professionalism of the educational programmes at STIP Jakarta in preparing graduates for successful careers in the maritime industry. The research demonstrates a strong alignment between the curriculum content, instructional methods, and industry relevance of nautical studies at STIP Jakarta with the requirements and expectations outlined by the IMO-STCW standards. Participants expressed high levels of satisfaction with the relevance of subjects taught, the practical application of knowledge, and the integration of industry trends into the curriculum. Moreover, the emphasis on practical training and hands-on learning experiences underscores the institution's commitment to providing students with a comprehensive education that prepares them for the rigours of the maritime industry. Furthermore, the findings highlight the positive impact of nautical studies management at STIP Jakarta on the professionalism and career outcomes of graduates. Participants expressed satisfaction with the preparation for industry roles, career advancement opportunities, and employability resulting from their education at STIP Jakarta. The recognition of the contribution of IMO-STCW standards to professionalism and safety underscores the importance of adhering to international benchmarks in maritime education and training. In light of these findings, it is evident that STIP Jakarta plays a crucial role in shaping the future of the maritime industry by producing competent and professional maritime professionals who are well-equipped to meet the challenges of the global market. Moving forward, it is imperative for educational institutions, industry stakeholders, and policymakers to continue collaborating to enhance the quality and relevance of maritime education and training, thus ensuring the continued success and competitiveness of maritime professionals in the global market. Through ongoing efforts to align with international standards and best practices, STIP Jakarta and similar institutions can continue to uphold their reputation as leaders in maritime education and training.

## Acknowledgments

The researchers thank to Maritime Institute of Jakarta, especially to the Principal, officers and lecturers. The researchers also thank for the full funding for this research in which given and facilitated by Pembiayaan Penelitian Sekolah Tinggi Ilmu Pelayaran Jakarta.

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