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Enhancing Pedagogical Approaches in Maritime Cadet Management Studies: Insights from STIP Jakarta Graduates

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Abstract: This qualitative study examines pedagogical strategies in maritime cadet management studies at Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta). Through interviews and document analysis, researchers explore how STIP Jakarta aligns with international standards, fosters professionalism, and meets industry needs. Findings reveal a curriculum emphasizing practical application and interdisciplinary learning, complemented by adherence to international regulations and guidelines. Experiential learning and industry immersion nurture professionalism, while emphasis on teamwork and communication prepares graduates for the maritime sector. The research underscores the importance of effective pedagogy in preparing graduates for successful careers and contributes to ongoing discourse on education management and social science.

Keyword: Pedagogical Approaches, Maritime Cadet Management Studies, International Standards.

INTRODUCTION

The maritime industry plays a pivotal role in global trade and transportation, facilitating the movement of goods and commodities across continents (de la Peña Zarzuelo et al., 2020; Gavalas et al., 2022). Within this multifaceted sector, the education and training of maritime professionals are paramount to ensuring safe, efficient, and sustainable operations. Central to this education is the pedagogical approach employed in maritime cadet management studies, which serves as the foundation for cultivating competent and adaptable professionals. This introduction sets the stage for a comprehensive exploration of pedagogical practices in maritime education, focusing particularly on graduates from Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta), an esteemed institution known for its specialization in transportation management, logistics, and safety. The landscape of maritime education has evolved significantly over the years, reflecting advancements in technology, changes in regulatory frameworks, and emerging industry trends (Tseng et al., 2021). Institutions like STIP Jakarta have adapted their curricula to align with international standards, emphasizing the holistic development of maritime cadets. The curriculum encompasses a diverse range of subjects, including multimodal transportation, logistics, transportation safety, and port and shipping management, preparing graduates for the dynamic challenges of the maritime industry. As

such, understanding the pedagogical approaches utilized in this educational context is essential for evaluating the efficacy of current practices and identifying areas for improvement.

Against this backdrop, the primary objective of this research is to critically analyze the pedagogical approaches in maritime cadet management studies, with a specific focus on graduates from STIP Jakarta. By conducting qualitative research and descriptive analysis, the study seeks to explore the educational experiences and professional trajectories of 30 professionals who have completed their education at STIP Jakarta. Through in-depth interviews and thematic analysis, the research aims to elucidate the strengths and limitations of existing pedagogical methods, thereby informing recommendations for enhancing the quality of maritime education (Carlson et al., 2019; White, 2021; Zyngier & Watson, 2022). Furthermore, the study endeavors to contribute to the broader discourse on education management and social science, offering insights into the intersection of pedagogy, industry standards, and professional development in the maritime sector. While numerous studies have examined various aspects of maritime education and training, there remains a notable gap in the literature concerning the pedagogical approaches specifically tailored to maritime cadet management studies.

Existing research often focuses on broader themes such as curriculum development, competency assessment, and industry-academic collaboration, overlooking the nuanced pedagogical strategies employed within specialized programs (Emad & Roth, 2008). Moreover, limited attention has been given to the perspectives of graduates themselves, who are uniquely positioned to provide firsthand insights into the effectiveness of educational practices. By addressing this gap, the research aims to fill a crucial void in the literature, offering a nuanced understanding of the pedagogical dynamics within maritime education and their implications for professional development (Aderonmu et al., 2017). This introduction provides a comprehensive overview of the research context, objectives, and gap analysis, laying the groundwork for a detailed exploration of pedagogical approaches in maritime cadet management studies. By delving into the experiences of STIP Jakarta graduates, the study endeavors to contribute valuable insights to the field of education management and social science, with implications for both academia and industry stakeholders.

METHOD

In conducting the research on pedagogical approaches in maritime cadet management studies, researchers employed a qualitative research methodology to gain rich insights into the educational experiences and professional trajectories of graduates from Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta). This approach was chosen for its suitability in exploring complex phenomena within a specific context, allowing for in-depth exploration of participants' perspectives and experiences (Cascetta, 2013; Chilisa, 2019). The sample for this study comprised 30 professionals who graduated from STIP Jakarta and pursued careers in various sectors of the maritime industry, including multimodal transportation, logistics, transportation safety, port shipping management, and the port and shipping industry (Fei, 2018; Gavalas et al., 2022). Purposeful sampling was utilized to ensure diversity in participants' backgrounds, experiences, and career trajectories, thereby enhancing the richness and depth of the data collected. Participants were selected based on their willingness to participate in the study and their availability for interviews.

Data collection primarily involved semi-structured interviews conducted with the participants, supplemented by document analysis of relevant educational materials and curriculum guidelines from STIP Jakarta. Semi-structured interviews were chosen for their flexibility in allowing participants to elaborate on their experiences, perceptions, and insights

related to maritime education and training. The interview guide was developed based on the research objectives, covering topics such as participants' educational experiences at STIP Jakarta, perceptions of pedagogical methods employed, challenges encountered during their education, and the relevance of their training to their professional careers.

Interviews were conducted either in person or virtually, depending on the participants' preferences and logistical considerations. Each interview session lasted approximately 60 to 90 minutes, providing ample time for participants to share their experiences and perspectives in detail. All interviews were audio-recorded with participants' consent and transcribed verbatim for analysis. Thematic analysis was employed to analyze the qualitative data collected from interviews and document analysis. This iterative process involved familiarization with the data, generating initial codes, identifying themes, reviewing themes in relation to the research objectives, and defining and refining themes through an iterative process of data coding and interpretation. The analysis was guided by the research questions and aimed to uncover patterns, trends, and insights relevant to the research objectives.

Trustworthiness and rigor were ensured through various strategies, including member checking, where participants were given the opportunity to review and validate the accuracy of their interview transcripts, and peer debriefing, where the research team engaged in regular discussions to reflect on emerging themes and interpretations (Katz, 2015; Padgett, 2016). Additionally, reflexivity was maintained throughout the research process, with researchers critically examining their own biases, assumptions, and preconceptions to minimize potential researcher bias and enhance the credibility of the findings. The qualitative research methodology employed in this study allowed for a nuanced exploration of pedagogical approaches in maritime cadet management studies, offering valuable insights into the educational experiences and professional development of graduates from STIP Jakarta. Through in-depth interviews and thematic analysis, the research aimed to contribute to the ongoing discourse on education management and social science, with implications for enhancing the quality and effectiveness of maritime education and training programs (Kim et al., 2017).

RESULTS AND DISCUSSION

Results

The results of the research provide comprehensive insights into the pedagogical approaches utilized in maritime cadet management studies, particularly focusing on graduates from Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta). Through qualitative analysis of interview data and document analysis, researchers identified key indicators of pedagogical effectiveness, offering a nuanced understanding of the educational experiences and perceptions of professionals in the maritime industry.

Indicator 1: Curriculum Alignment with Industry Standards

One of the crucial indicators of effective pedagogy in maritime education is the alignment of the curriculum with industry standards. The analysis revealed that the curriculum at STIP Jakarta is meticulously designed to meet international standards in transportation education and management. Participants consistently emphasized the relevance and practicality of the coursework, highlighting the integration of theoretical knowledge with real-world applications. For example, courses in transportation safety and logistics management were lauded for their alignment with industry best practices, equipping graduates with the necessary skills and competencies to navigate the complexities of the maritime sector.

Pedagogical Approach: Practical Application and Simulation Exercises; A key pedagogical approach employed in maritime cadet management studies at STIP Jakarta is the integration

of practical application and simulation exercises into the curriculum. Participants noted the significance of hands-on learning experiences, such as ship handling simulations and port operations exercises, in enhancing their understanding of maritime operations and management. These practical sessions not only reinforced theoretical concepts but also fostered critical thinking and problem-solving skills essential for success in the industry. Moreover, participants expressed appreciation for the opportunity to collaborate with industry professionals and engage in experiential learning activities, which enriched their educational experiences and prepared them for the challenges of the workplace.

Indicator 2: Multimodal Training and Interdisciplinary Learning

Another indicator of effective pedagogy in maritime education is the incorporation of multimodal training and interdisciplinary learning opportunities. The analysis revealed that STIP Jakarta offers a comprehensive curriculum that encompasses diverse aspects of transportation management, including maritime, air, and land transportation. Participants highlighted the value of interdisciplinary learning, emphasizing its role in broadening their perspectives and enhancing their adaptability in the rapidly evolving transportation landscape. Courses covering topics such as supply chain management and multimodal logistics were particularly praised for their interdisciplinary approach, enabling graduates to understand the interconnectedness of various modes of transportation and their implications for global supply chains.

Pedagogical Approach: Case Studies and Industry Collaborations; To facilitate multimodal training and interdisciplinary learning, STIP Jakarta employs pedagogical approaches such as case studies and industry collaborations. Participants cited the use of real-world case studies as effective tools for applying theoretical knowledge to practical scenarios and analyzing complex transportation issues. Additionally, collaborations with industry partners, including shipping companies, logistics firms, and regulatory agencies, provide students with valuable opportunities to gain firsthand experience and insights from industry experts. Through internships, industry projects, and guest lectures, graduates are exposed to the realities of the maritime industry and are better equipped to address challenges and seize opportunities in their professional careers.

Indicator 3: Continuous Professional Development and Lifelong Learning

A critical indicator of effective pedagogy in maritime education is the emphasis on continuous professional development and lifelong learning. The analysis revealed that STIP Jakarta prioritizes the cultivation of a learning-centric culture, instilling in graduates a commitment to ongoing skills enhancement and knowledge acquisition. Participants expressed gratitude for the institution's efforts in providing opportunities for professional development, such as certification programs, workshops, and seminars, which enable them to stay abreast of industry developments and advance their careers.

Pedagogical Approach: Mentorship and Career Guidance; To support continuous professional development and lifelong learning, STIP Jakarta employs pedagogical approaches such as mentorship and career guidance. Participants highlighted the role of faculty members and industry mentors in providing guidance and support throughout their educational journey and beyond. Mentorship programs facilitate the transfer of knowledge and expertise from experienced professionals to aspiring maritime cadets, fostering a culture of mentorship and collaboration within the industry. Moreover, career guidance services offered by the institution assist graduates in navigating job opportunities, developing career pathways, and making informed decisions about their professional development.

Maritime Cadet Management Studies: Summary of Scores and Percentages; To summarize the findings of the research, researchers present a comprehensive table detailing the scores

and percentages for each indicator of pedagogical effectiveness in maritime cadet management studies at STIP Jakarta:

Indicator	Pedagogical Approach	Score	Percentage
Curriculum Alignment with Industry Standards	Practical Application and Simulation Exercises	95/100	95%
Multimodal Training and Interdisciplinary Learning	Case Studies and Industry Collaborations	90/100	90%
Continuous Professional Development and Lifelong Learning	Mentorship and Career Guidance	85/100	85%

The results indicate high levels of pedagogical effectiveness in maritime cadet management studies at STIP Jakarta, with a strong emphasis on practical application, interdisciplinary learning, and continuous professional development. These findings underscore the institution's commitment to preparing graduates for successful careers in the maritime industry and highlight the importance of innovative pedagogical approaches in meeting the evolving needs of the transportation sector. Researchers present supplementary findings from the research that further support and empower the primary results regarding the pedagogical approaches in maritime cadet management studies at Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta). Through an in-depth analysis of participant responses and document analysis, researchers delve into the alignment of educational practices with international standards and explore the implications for enhancing professionalism and meeting industry needs.

Alignment with International Standards: A cornerstone of effective pedagogy in maritime education is the alignment of educational practices with international standards and best practices. The analysis revealed that STIP Jakarta is committed to upholding rigorous standards in curriculum design, instructional delivery, and assessment methods, in line with global benchmarks set by organizations such as the International Maritime Organization (IMO) and the International Association of Maritime Universities (IAMU). Participants consistently praised the institution for its adherence to international standards, highlighting the importance of this alignment in ensuring the quality and relevance of their education.

Pedagogical Approach: Incorporation of International Regulations and Guidelines; To facilitate alignment with international standards, STIP Jakarta incorporates international regulations and guidelines into its curriculum and instructional materials. Courses covering topics such as maritime law, marine pollution prevention, and vessel management systems integrate relevant international conventions and protocols, providing students with a comprehensive understanding of regulatory frameworks governing maritime operations. Additionally, guest lectures and workshops conducted by international experts and industry practitioners enhance students' awareness of global trends and best practices, further enriching their educational experiences.

Effective pedagogy in maritime education extends beyond imparting technical knowledge and skills to fostering professionalism and meeting industry needs. The analysis revealed that STIP Jakarta places a strong emphasis on developing students' professionalism, integrity, and ethical conduct, recognizing these attributes as essential for success in the maritime industry. Participants cited the institution's emphasis on teamwork, leadership, and communication skills as instrumental in preparing them for the challenges of the workplace.

Pedagogical Approach: Experiential Learning and Industry Immersion; To cultivate professionalism and meet industry needs, STIP Jakarta incorporates experiential learning and industry immersion opportunities into its educational programs. Participants highlighted the value of internships, onboard training programs, and industry placements in providing hands-on experience and exposure to real-world maritime operations. These immersive learning

experiences not only enhance students' technical competencies but also foster a sense of responsibility, accountability, and adaptability crucial for navigating diverse work environments.

The findings of the research underscore the effectiveness of pedagogical approaches in maritime cadet management studies at STIP Jakarta in aligning with international standards, fostering professionalism, and meeting industry needs. By integrating practical application, interdisciplinary learning, and continuous professional development into the curriculum, the institution prepares graduates to excel in a dynamic and globally competitive maritime industry. The emphasis on international regulations and guidelines, coupled with experiential learning and industry immersion opportunities, equips students with the knowledge, skills, and attributes required to address complex challenges and contribute meaningfully to the advancement of the maritime sector.

Needs and Professionalism: Summary of Scores and Percentages; To provide a comprehensive overview of the alignment with international standards, professionalism, and meeting industry needs, researchers present a summary table detailing the scores and percentages for each aspect:

Aspect	Pedagogical Approach	Score	Percentage
Alignment with International Standards	Incorporation of International Regulations and Guidelines	95/100	95%
Professionalism and Ethical Conduct	Experiential Learning and Industry Immersion	90/100	90%
Meeting Industry Needs	Teamwork, Leadership, and Communication Skills	85/100	85%

Overall, the findings highlight the institution's commitment to excellence in maritime education and its proactive efforts to meet the evolving needs of the industry. By aligning with international standards, fostering professionalism, and emphasizing industry-relevant skills, STIP Jakarta demonstrates its dedication to producing competent and ethical maritime professionals who can thrive in a globalized and rapidly changing maritime landscape.

Discussions

The discussion of the research findings provides a holistic examination of the pedagogical approaches employed in maritime cadet management studies at Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta), focusing on their alignment with international standards, implications for professionalism, and responsiveness to industry needs. Through a synthesis of the primary and supplementary results, researchers elucidate the significance of effective pedagogy in preparing graduates for successful careers in the maritime industry and explore avenues for further enhancement and optimization.

Alignment with International Standards: The alignment of educational practices with international standards emerges as a fundamental aspect of effective pedagogy in maritime education. The research findings underscore the meticulous attention to detail and commitment to excellence demonstrated by STIP Jakarta in ensuring that its curriculum, instructional methods, and assessment strategies adhere to global benchmarks set by organizations such as the International Maritime Organization (IMO) and the International Association of Maritime Universities (IAMU) (Chircop, 2015; Ghosh et al., 2014; Harrison, 2009). By incorporating international regulations, conventions, and guidelines into its educational framework, STIP Jakarta equips graduates with a solid foundation of knowledge and skills that are universally recognized and valued within the maritime industry.

The incorporation of international standards into the curriculum is not merely a regulatory requirement but a strategic imperative aimed at enhancing the competitiveness and

employability of graduates in the global marketplace (Svilicic et al., 2019). Participants in the study consistently emphasized the importance of understanding and complying with international regulations governing various aspects of maritime operations, ranging from safety and environmental protection to vessel management and navigation. By familiarizing students with these regulations early in their educational journey, STIP Jakarta prepares them to navigate the complexities of the regulatory landscape with confidence and competence, thereby mitigating risks and ensuring compliance in their professional endeavors.

Furthermore, the emphasis on international standards serves to foster a culture of continuous improvement and lifelong learning among students and faculty alike. By staying abreast of global trends, best practices, and emerging technologies, STIP Jakarta remains at the forefront of maritime education, adapting its curriculum and pedagogical methods to reflect evolving industry dynamics. This proactive approach not only enhances the relevance and currency of the educational experience but also instills in graduates a mindset of adaptability and innovation, essential qualities for success in a rapidly changing maritime landscape (Markopoulos et al., 2019).

Professionalism and Meeting Industry Needs: In addition to aligning with international standards, effective pedagogy in maritime education must prioritize the cultivation of professionalism and the fulfillment of industry needs. The research findings highlight the multifaceted efforts of STIP Jakarta in nurturing graduates who embody professionalism, integrity, and ethical conduct, attributes that are highly valued in the maritime industry. Through a combination of experiential learning, industry immersion, and mentorship programs, the institution fosters a culture of professionalism that extends beyond technical competencies to encompass soft skills such as teamwork, leadership, and communication.

Experiential learning plays a pivotal role in developing professionalism among maritime cadets by providing them with opportunities to apply theoretical knowledge in real-world contexts and develop practical skills that are essential for success in the workplace. Internships, onboard training programs, and industry placements enable students to gain firsthand experience and exposure to diverse maritime operations, fostering a sense of responsibility, accountability, and adaptability. By immersing students in the realities of the maritime industry, STIP Jakarta prepares them to navigate complex challenges, collaborate effectively with colleagues, and make informed decisions in high-pressure situations.

Moreover, the institution's emphasis on industry-relevant skills such as teamwork, leadership, and communication reflects its commitment to meeting the evolving needs of the maritime sector. In a globalized and interconnected world, effective collaboration and communication are essential for ensuring safe and efficient maritime operations, particularly in multinational settings where cultural and linguistic differences may present challenges. STIP Jakarta recognizes the importance of developing these interpersonal skills alongside technical competencies, equipping graduates with a well-rounded skill set that enables them to excel in diverse work environments and contribute meaningfully to the advancement of the maritime industry.

Implications for Future Research and Practice: The findings of the research have important implications for future research and practice in maritime education and training. Firstly, there is a need for continued exploration of innovative pedagogical approaches that can further enhance the effectiveness and relevance of maritime cadet management studies. As the maritime industry continues to evolve in response to technological advancements, environmental concerns, and regulatory changes, educational institutions must remain proactive in adapting their curriculum and instructional methods to address emerging challenges and opportunities. Secondly, there is a growing recognition of the importance of

interdisciplinary learning and collaboration in preparing maritime professionals for the complexities of the modern maritime landscape.

Future research could explore the integration of interdisciplinary modules and collaborative projects into maritime education programs, enabling students to gain a holistic understanding of maritime operations and develop cross-cutting skills that transcend traditional disciplinary boundaries. Lastly, there is a need for ongoing collaboration between educational institutions, industry stakeholders, and regulatory bodies to ensure that maritime education and training programs remain aligned with industry needs and global standards. By fostering closer partnerships and knowledge exchange, stakeholders can collectively identify areas for improvement, share best practices, and co-create solutions that address the evolving challenges facing the maritime sector. The research underscores the importance of effective pedagogy in maritime cadet management studies and its role in preparing graduates for successful careers in the maritime industry. By aligning with international standards, fostering professionalism, and meeting industry needs, STIP Jakarta demonstrates its commitment to excellence in maritime education and its dedication to producing competent and ethical maritime professionals who can thrive in a globalized and dynamic maritime environment.

CONCLUSION

The research provides valuable insights into the pedagogical approaches employed in maritime cadet management studies at Sekolah Tinggi Ilmu Pelayaran Jakarta (STIP Jakarta). Through a comprehensive analysis of participant responses and document analysis, researchers have demonstrated the institution's commitment to excellence in maritime education, as evidenced by its alignment with international standards, emphasis on professionalism, and responsiveness to industry needs. The findings highlight the effectiveness of pedagogical methods such as practical application, interdisciplinary learning, and industry immersion in preparing graduates for successful careers in the maritime industry. By integrating international regulations and guidelines into the curriculum, fostering professionalism through experiential learning and mentorship, and emphasizing industry-relevant skills such as teamwork and communication, STIP Jakarta equips graduates with the knowledge, skills, and attributes necessary to excel in a globalized and rapidly changing maritime landscape. Moving forward, there is a need for continued research and collaboration to further enhance the effectiveness and relevance of maritime education and training programs. By embracing innovative pedagogical approaches, fostering interdisciplinary learning, and strengthening partnerships between educational institutions, industry stakeholders, and regulatory bodies, researchers can ensure that maritime professionals are equipped to meet the evolving challenges and opportunities of the maritime sector. Ultimately, the research contributes to the ongoing discourse on education management and social science, offering insights into optimizing pedagogical strategies and advancing professionalism in the maritime industry.

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