

## Teaching Strategies, Pedagogical Competence, And Challenges Among Maritime Professional Instructors Of Maritime Higher Education Institutions (MHEIs): Bases For An Enhancement Program

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### ABSTRACT

**Purpose:** This study aims to investigate the teaching strategies, pedagogical competence, and challenges encountered by maritime professional instructors in Maritime Higher Education Institutions (MHEIs) to inform the development of an enhancement program.

**Approach/Design/Methodology:** A descriptive-comparative design was employed, utilizing a quantitative approach to examine the teaching strategies, pedagogical competence, and challenges faced by 75 maritime professional instructors selected through stratified random sampling. Data were gathered using a researcher-made instrument consisting of four parts, with its validity established through expert validation and reliability ensured via pilot testing using Cronbach's Alpha method.

**Findings:** The results indicated that the most prevalent teaching strategies among maritime professional instructors included quizzes, tests, discussions, demonstrations, hands-on activities, practical exercises, and lectures enhanced by interactive techniques. The instructors exhibited a very high level of pedagogical competence overall and across various categories, including rank, teaching experience, educational attainment, and classification. Nonetheless, they encountered significant challenges such as financial concerns, limited resources and skills, and fatigue stemming from inadequate sleep.

**Research Implications:** The study underscores the importance of a balanced approach that integrates traditional and interactive teaching methods to foster comprehensive learning in maritime education. The high level of pedagogical competence among instructors highlights their effectiveness in facilitating meaningful learning experiences. Furthermore, the findings suggest that factors such as training in instructional methods and industry expertise may be more critical in developing effective teaching skills than conventional indicators like rank, experience, or educational background.

**Practical Implications:** Educational institutions should consider addressing the challenges faced by maritime professional instructors by providing support systems and resources that enhance teaching efficacy and well-being. Additionally, promoting ongoing professional development focused on instructional methods and practical skills can further strengthen the pedagogical competence of instructors, ultimately benefiting student learning outcomes in maritime education.

**Key-words:**

*Demonstrations, Fatigue, Financial concerns, Hands-on activities, Lectures, Limited sources and skills, Practical exercises, Quizzes, Tests, Marine Education & Training - Marine Higher Education Institution- Maritime Professional Instructor.*

**INTRODUCTION**

Maritime education has undergone significant evolution in response to the dynamic demands of the maritime industry. Initially rooted in vocational training, it has expanded to include interdisciplinary academic fields that align with stakeholder requirements (Martínez De Osés & Ventura Jarrod, 2021). The global quality of maritime education is critical, as it plays an essential role in training individuals for safe and proficient navigation of the oceans. This quality is heavily dependent on the competencies of instructors who impart vital knowledge and skills to future seafarers (Vujičić et al., 2020; Wulandari et al., 2020).

To maintain high standards, the International Convention on Standards of Training, Certification and Watchkeeping (STCW Convention) establishes requirements for instructor qualifications in Maritime Education and Training (MET) institutions (Kuzmenko & Kutsenko, 2018). In the Philippines, the Maritime Industry Authority (MARINA) has implemented the Continuing Development Training program for instructors and assessors to ensure they remain current with industry standards (MARINA Circular No. SC-2024-01, 2024). The Commission on Higher Education (CHED) further reinforces these standards by mandating specific requirements for maritime education, collaborating with MARINA and the Technical Education and Skills Development Authority (TESDA) to enhance educational quality and outcomes.

In the 21<sup>st</sup> century, educational practices are undergoing substantial transformations to meet societal needs. The pedagogical competence of teachers is vital for effective education delivery, requiring transversal skills like critical thinking, interpersonal skills, and media literacy (Tkachenko et al., 2023). Continuous enhancement of pedagogical competence is essential for educators to keep pace with innovation and evolving student needs (Halder, 2023).

For maritime professional instructors, pedagogical competence is crucial, as it directly influences teaching effectiveness and the development of seafarers' knowledge and safety standards (Victoriano et al., 2022). While seafarers-turned-instructors bring valuable experience, they must continuously update their skills to provide relevant instruction (Vujičić et al., 2020). Instructors should not only possess subject matter expertise and shipboard experience but also a genuine passion for teaching, which fosters an engaging learning environment.

Despite holding the required bachelor's degrees, many maritime instructors lack formal training in teaching

methodologies. Pursuing advanced degrees or specialized training can help bridge this gap, equipping them with vital teaching strategies, classroom management techniques, and assessment methods. This ongoing professional development benefits both instructors and students, ensuring the delivery of quality education.

The inconsistency in teaching strategies and competencies due to a lack of formal training poses a significant gap in MET. This gap can lead to inadequately trained seafarers, making the educational process challenging for students. Effective monitoring of learning outcomes is essential for improving education quality and addressing these challenges (Estimo, 2020).

This study aims to assess the pedagogical competence of maritime instructors in higher education institutions by identifying the teaching strategies utilized and the challenges faced. The findings will inform an enhancement program to improve the overall quality and effectiveness of maritime education and training.

This study is grounded in Constructivism Theory, as proposed by Jean Piaget (1977), which emphasizes that individuals learn from their experiences and reflections. Constructivism promotes a learner-centered approach, where teachers facilitate learning through engaging activities such as project work and inquiry-based learning. This methodology encourages outdoor lessons and interactions with the environment, fostering a deeper connection between students and the maritime context.

Incorporating Constructivism into the pedagogical practices of maritime instructors supports inquiry-based learning and reflective practices, which are essential for developing critical thinking and adaptability. By tailoring teaching methods to meet diverse student needs, maritime instructors can prepare future professionals for the dynamic challenges of the maritime industry while ensuring a comprehensive educational experience.

Thus, the main purpose of this study is to determine the teaching strategies, pedagogical competence of maritime professional instructors in MHEIs, and the challenges encountered in the delivery of instruction as bases for an enhancement program.

Specifically, it seeks answers to the following questions: a) What are the teaching strategies used by the maritime professional instructors of

Maritime Higher Education Institutions? b) What is the level of pedagogical competence of maritime professional instructors when taken as a whole group and when classified according to rank, length of teaching experience, highest educational attainment, and classification of instructors? c) What are the challenges encountered by Maritime Professional Instructors in the delivery of instructions? d) Is there a significant difference in the pedagogical competence of maritime professional instructors when grouped according to rank, length of teaching experience, highest educational attainment, and classification of instructors? e) What enhancement program can be designed to enhance the teaching strategies of the maritime professional instructors?

## METHODOLOGY

This study employed a descriptive-comparative design with a quantitative approach to investigate the pedagogical competence of maritime professional instructors in maritime higher education institutions (MHEIs) and the challenges they face in delivering instruction. The descriptive-comparative design was deemed appropriate for this research as it allows for the exploration of prevailing opinions and beliefs, processes, and emerging trends without manipulating independent variables. By utilizing this design, the study aimed to describe and analyze the conditions that exist among the instructors, uncovering relationships between various non-manipulative factors.

The respondents for this study were 75 maritime professional instructors, including those from deck, engine, and technical allied disciplines, drawn from a total of 92 instructors through stratified random sampling. A researcher-made questionnaire was developed, consisting of four parts: demographic information (Part I), a checklist of teaching strategies used (Part II), a questionnaire assessing pedagogical competence (Part III), and a list of challenges encountered in instruction (Part IV). The pedagogical competence section included 20 items validated by experts, achieving a high reliability index using a 5-point Likert scale to gauge responses, where higher scores indicated greater competence.

To ensure the validity and reliability of the questionnaire, it underwent a rigorous validation process involving five experts who provided feedback based on established criteria. The instrument received a mean score of 4.64, indicating excellent validity. Reliability was assessed through a pilot test conducted with 30 educators, utilizing the Cronbach Alpha Method, yielding a reliability coefficient of .946, which reflects high consistency in the data collection instrument. Following validation and reliability testing, the questionnaire was administered

face-to-face to respondents, ensuring they were informed about the study purpose and scope and that consent was obtained.

Data collected from the questionnaires were tallied and analyzed using both descriptive and inferential statistical methods. Descriptive statistics, including frequency counts, percentage distributions, means, and standard deviations, were used to summarize demographic data and assess teaching strategies and encountered challenges. Inferential statistics, specifically the t-test for Independent Samples and One-Way ANOVA, were employed to evaluate significant differences in pedagogical competence based on rank, teaching experience, educational attainment, and instructor classification. The findings from this research will inform the development of an enhancement program aimed at improving the teaching strategies of maritime professional instructors.

## RESULTS

### Teaching Strategies Used by Maritime Professional Instructors of Maritime Higher Education Institutions

Results suggest that while these strategies can effectively motivate students and encourage critical thinking, problem-solving, collaboration, and creativity, they may only sometimes be the most effective for achieving desired learning outcomes in maritime education.

According to Frias et al. (2022), role-playing, case studies, project-based learning, reflections, and journal writing are beneficial for motivation and critical thinking in maritime education but may not be always effective in achieving desired learning outcomes.

Integrating traditional and interactive approaches enhances the effectiveness of teaching strategies. The findings align with research emphasizing the importance of using various methods to encourage critical thinking, active participation, and deeper understanding (Bean & Melzer, 2021).

Table 1: Frequency and Rank for Teaching Strategies Used by Maritime Professional Instructors

Teaching Strategies	Frequency	Rank
• Quizzes and Tests	155	1
• Discussions	153	2
• Demonstrations	150	3
• Hands-on/Practical Activities/ Exercises	146	4
• Lecture	145	5

• Questioning	139	6
• Interactive Lecture	134	7
• Laboratory Exercises	132	8
• Assignments	131	9
• Assessments and Feedback	123	10
• Student Reporting	111	11
• Simulation-based Training	97	12
• Scenario-based Learning	92	13
• Collaborative Learning	90	14
• Observations	83	15
• Rubrics	77	16
• Modeling	53	17
• Role Playing	44	18
• Case Studies	43	19
• Project-based Learning	36	20
• Reflections	36	20
• Journal Writing	26	22

### Level of Pedagogical Competence of Maritime Professional Instructors When Grouped According to Profile

The results show that the pedagogical competence of maritime professional instructors is consistently rated "Very High," with an overall mean of 4.50 and a standard deviation of 0.438. Instructors with longer teaching experience demonstrate the highest competence, with a mean of 4.80 and a standard deviation of 0.122. It reflects their extensive knowledge, effective teaching methods, and significant influence on student learning, highlighting the importance of experience, ongoing professional development, and institutional support in promoting high-quality education and lifelong learning.

These findings are further validated by the study of Radkevych et al. (2023), which underscores the critical importance of enhancing pedagogical competence among maritime professional instructors to meet the demands of the rapidly evolving maritime industry.

Moreover, according to (Maryani et al., 2021), teachers with longer working experience and higher education levels show increased pedagogical competence, as experience and education positively impact professional development and teaching effectiveness.

Table 2: Summary Table of Pedagogical Competence of Maritime Professional Instructors According to Demographic Profile

Category	Mean	SD	
A. Entire Group	4.50	.438	Very High
B. Length of Teaching Experience			
Longer	4.80	.122	Very High
Middle	4.34	.657	Very High
Shorter	4.51	.372	Very High
C. Rank			
Management Level	4.47	.452	Very High
Operational Level	4.50	.448	Very High
D. Highest Educational Attainment			
Bachelor's Degree	4.48	.368	Very High
Masteral	4.57	.477	Very High
Doctorate	4.22	1.107	Very High
E. Classification of Instructors			
Deck	4.53	.359	Very High
Engine	4.37	.589	Very High
Allied	4.72	.162	Very High

### Level of Pedagogical Competence of Maritime Professional Instructors When Grouped According to Rank

Operational level instructors demonstrate a strong ability to appreciate and motivate students' ideas while exhibiting a need for improvement in granting students more control over the learning process. Their overall pedagogical competence reflects effectiveness in teaching and engaging students, yet it also highlights the necessity to foster greater student autonomy alongside their motivational strategies. Similarly, management level instructors excel in motivating students and instilling good learning habits, but they too face challenges in allowing students to take control of their learning. Collectively, both operational and management-level instructors exhibit high pedagogical competence, suggesting a robust teaching environment enriched with effective motivational techniques, while also indicating areas for enhancement in encouraging student autonomy. The lower scores in granting students' control may stem from a reliance on traditional, teacher-centered methods, where instructors feel the need to maintain full authority to meet educational standards and ensure comprehensive coverage of the curriculum, often underestimating students' maturity and responsibility to manage their own learning.

## Pedagogical Competence of Maritime Professional Instructors When Grouped According to Length of Teaching Experience

Maritime professional instructors with shorter teaching tenures exhibit a strong ability to appreciate students' good ideas and efforts, although they show a need for improvement in granting students' control over their learning processes. This suggests a focus on recognizing student contributions while indicating opportunities to empower students in their educational journey. Instructors with moderate experience, teaching between 11 to 22 years, excel in motivating students and instilling good learning habits but also tend to adopt a more teacher-centered approach, maintaining significant control over the learning environment. In contrast, instructors with nearly 23 to 33 years of experience demonstrate exemplary performance across a range of pedagogical competencies, including facilitating creative and critical learning, promoting communicative learning, and respecting diversity. Their extensive experience contributes to exceptional efficacy in their teaching practices, highlighting the correlation between teaching longevity and pedagogical skillfulness.

The overall result shows that maritime professional instructors across all experience levels demonstrate a very high level of pedagogical competence, as evident in the mean obtained at 4.50, with a standard deviation of 0.438.

Maritime professional instructors, including seafarers-turned-maritime educators and MET instructors, exhibit a promising level of pedagogical competence, as indicated by studies focusing on their commitment to teaching, self-reported technology proficiency, and environmental competence development (Estimo, 2020; Radkevych et al., 2023; Sharma & Nazir, 2021).

## Pedagogical Competence of Maritime Professional Instructors When Grouped According to Highest Educational Attainment

At the Bachelor level, the study indicates a very high level of pedagogical competence, particularly in recognizing students for their excellent ideas and efforts, as well as in motivating them and instilling good learning habits. These findings align with existing research that emphasizes the importance of positive reinforcement and intrinsic motivation in engaging undergraduate students. However, there is a notable opportunity for improvement in empowering students to take more control over their learning processes, as autonomy has been shown to enhance engagement and performance at this level. Similarly, maritime professional instructors at the Masteral level exhibit strong pedagogical competence, especially in motivating students and effectively delivering course content. Yet, they too face challenges in

allowing student control, suggesting a need for further development in fostering student autonomy and self-directed learning. At the Doctoral level, educators demonstrate exceptional pedagogical competence, achieving very high performance across various competencies, including inspiring critical thinking, creating an effective classroom environment, and promoting student responsibility. This highlights the advanced skills and professionalism of doctoral educators in facilitating a comprehensive learning experience. The result aligns with the research by Kushwaha and Dube (2023), which emphasizes the importance of high academic achievements for academic careers and leadership positions.

## Pedagogical Competence of Maritime Professional Instructors When Grouped According to Instructors' Classification

Professional instructors in the Deck, Engine, and Technical Allied disciplines exhibit exceptional pedagogical competence across various teaching aspects. Deck Instructors particularly excel in motivating students and instilling good learning habits, showcasing their strong ability to engage and inspire effectively. However, they demonstrate a slightly lower emphasis on granting students' autonomy in their learning processes, which, while still positive, indicates room for growth. These findings align with existing research that emphasizes the significance of instructor motivation and student-centered approaches in maritime education. Engine instructors also show very high competence, especially in appreciating students for their good ideas and efforts, which fosters essential skills and a lifelong love for learning. Nonetheless, like their Deck counterparts, they also exhibit a lower focus on student control over the learning process. Conversely, Technical Allied Instructors demonstrate exemplary proficiency in maintaining safe and orderly classrooms, highlighting their capacity to create conducive learning environments crucial for maritime education. However, there remains an opportunity for improvement in encouraging greater student autonomy within their teaching practices.

The findings show that balancing motivating students and providing structured guidance is crucial in maritime training, where theoretical knowledge and practical skills are essential (Abad & Manalo, 2020). While maintaining a structured and safe environment is crucial, empowering students to take ownership of their learning journey can enhance engagement, motivation, and overall learning outcomes. Encouraging student involvement in decision-making processes and fostering a sense of autonomy can lead to increased interest and investment in their education, ultimately contributing to a more enriching educational experience for both students and instructors (Vujičić et al., 2020).

## Pedagogical Competence of Maritime Professional Instructors When Taken as a Whole

Data indicate that Maritime Professional Instructors collectively display a very high level of pedagogical competence across various teaching domains. They are particularly skilled at motivating students and instilling good learning habits, which significantly contributes to the academic and personal development of their students. However, while the overall competence is commendable, there are identifiable areas for further growth. Specifically, the emphasis on granting students control over their learning processes is slightly lower, suggesting an opportunity for instructors to enhance student empowerment and involvement in shaping their educational experiences. This focus on fostering greater student autonomy could lead to improved learning outcomes and a more enriching educational environment.

These findings are most relevant to those of Estimo (2020) on the level of competence of maritime professional instructors in various pedagogical aspects such as facilitating learning, classroom management, use of technology, student motivation, assessment, and professional development. Overall, the findings confirm that maritime professional instructors demonstrate a commendable level of pedagogical competence. Their ability to inspire, create engaging learning environments, and adapt teaching strategies to meet diverse student needs is noteworthy. Their consistent performance at very high levels across most aspects underscores their effectiveness in facilitating meaningful learning experiences for their students.

**Table 3: Level of Pedagogical Competence of Maritime Professional Instructors When Taken as a Whole Group**

Pedagogical Competence	Mean	SD	Interpretation
1. Facilitate and inspire students to learn creatively and critically.	4.68	.549	Very High
2. Create and maintain a conducive classroom atmosphere.	4.58	.619	Very High
3. Design and develop technology-based materials (video, audio, multimedia, etc.) to enhance learning materials, experiences, and evaluations.	4.45	.643	Very High
4. Appreciate students for giving good ideas or efforts.	4.76	.460	Very High
5. Motivate and instill good learning habits among students.	4.79	.412	Very High
6. Assess what students have learned rationally.	4.63	.610	Very High
7. Allow students to have some control over the learning process.	3.83	.935	High
8. Promote communicative language learning and responsibility through activities and discussions.	4.47	.553	Very High
9. Maintain a safe and orderly classroom that facilitates students' learning.	4.69	.545	Very High
10. Engage students in collaborative learning activities that promote interaction.	4.37	.749	Very High
11. Undergo professional upgrading to advance my teaching expertise.	4.36	.782	Very High
12. Develop professional relationships and networks.	4.39	.751	Very High
13. Establish a respectful environment for a diverse population of students.	4.57	.738	Very High
14. Adapt to various teaching styles to accommodate different student learning styles.	4.49	.705	Very High
15. Know very well the courses that I teach.	4.52	.723	Very High
16. Encourage students to bring life experiences into the classroom and create activities that draw on those experiences.	4.37	.802	Very High
17. Develop clear and measurable learning outcomes.	4.49	.705	Very High
18. Provide realistic student-centered lessons and activities based on concepts learned by the students.	4.40	.717	Very High
19. Provide prompt and helpful feedback on assignments, quizzes, activities, and examinations that enhance learning.	4.59	.639	Very High
20. Ability to use effective teaching strategies and instructional aids that engage learners to achieve desired outcomes.	4.57	.701	Very High
<b>Over-all Mean</b>	<b>4.50</b>	<b>.438</b>	Very High

## Challenges Encountered by Maritime Professional Instructors in the Delivery of Instruction

The results gathered in determining the different challenges encountered by maritime professional instructors that impact their teaching effectiveness and overall well-being are hereby presented in Table 9.

As shown in the results, the topmost challenge, as indicated by 31 participants and ranking first, is difficulty concentrating due to financial concerns. This challenge reflects the significant distraction and stress that financial worries can impose, affecting instructors' focus and effectiveness in their work. The challenge of limited resources and skills follows closely, as noted by 25 participants, and ranked second, highlighting the need for better support and continuous professional development to enhance instructional capabilities.

Additionally, fatigue and tiredness from inadequate sleep ranked third with 22 mentions, underscoring the importance of well-being and work-life balance for instructors' overall performance. On the other end of the spectrum, lacking technical skills received a minor emphasis, with only one respondent citing it as a concern, suggesting that while technical competence is essential, it may not be as pressing as other challenges faced by maritime professional instructors.

According to Erno (2022), inadequate financial literacy among teachers, particularly in areas like saving, investing, and retirement planning, can have long-term consequences on their decision making and overall productivity, as financial worries can be a significant distraction.

Table 4: Challenges encountered by Maritime Professional Instructors

Challenges	F	Rank
• I have difficulty in concentrating due to financial concerns.	31	1
• I have limited resources and skills necessary to do the tasks.	25	2
• I feel fatigue/tiredness caused by inadequate sleep.	22	3
• I have inadequate background knowledge and skills in teaching.	15	4
• I have difficulty in adjusting to various teaching styles.	13	5.5
• I have an uncomfortable learning environment.	13	5.5
• I have difficulty in preparing the lesson plan (Detailed Teaching Syllabus) and notes to be provided to students.	11	7
• I have difficulty teaching BSMT students with Marine Engineering terms or vice versa.	9	8.5
• I have poor communication or lack of clear direction to students.	9	8.5
• I do not have the patience in dealing with misbehaving students.	8	10
• I do have difficulty in managing my time.	7	11
• I have difficulty in managing big classes.	5	12
• I have difficulty in handling more than three teaching preparations.	4	13
• I have an overloaded class schedule with little time to rest in between.	3	14
• I lack technical skills.	1	15

## A Significant Difference in the Pedagogical Competence of Maritime Professional Instructors According to Rank

The analysis reveals that there are no significant differences in the pedagogical competence of Maritime Professional Instructors when categorized by rank into operational and management roles. The findings indicate that both groups exhibit similar levels of pedagogical competence, suggesting that the rank of instructors does not notably influence their teaching effectiveness. This outcome highlights the consistency in pedagogical skills across different roles within the maritime education framework, reinforcing the notion that effective teaching practices are upheld regardless of rank.

Table 5: t-test for Significant Difference in the Pedagogical Competence of Maritime Professional Instructors When Grouped According to Rank

Rank	n	Mean	Sd	df	t	p-value	Interpretation
Operational	45	4.50	.448	68	.287	0.775	Not Significant
Management	25	4.47	.452				

**A Significant Difference in the Pedagogical Competence of Maritime Professional Instructors According to Length of Teaching Experience, Highest Educational Attainment, and Classification of Instructors**

The analysis presented indicates that there are no significant differences in the pedagogical competence of maritime professional instructors based on their length of teaching experience. Instructors across short, mid-range, and long experience categories demonstrate similar levels of pedagogical effectiveness. This finding aligns with previous research, suggesting that factors such as motivation, engagement, and reflective teaching practices play a crucial role in influencing teaching effectiveness, rather than merely the number of years spent in the profession.

Additionally, the study reveals no significant differences in pedagogical competence based on the highest educational attainment of instructors. Despite varying degrees of education, from bachelor's

to doctoral levels, the results indicate that higher educational qualifications do not necessarily translate into superior teaching competence. Instead, practical teaching skills may be more significantly influenced by teaching experience, training in instructional methods, and relevant industry expertise, highlighting the importance of practical application in maritime education.

Furthermore, when examining the pedagogical competence of instructors classified as Deck, Engine, or Allied, the study finds no statistically significant differences among these groups. This suggests that instructors' pedagogical abilities are not confined to their specific area of expertise. Educational institutions can benefit from this insight by leveraging the diverse instructional strengths of instructors across different classifications, thereby enhancing students' educational experiences through a broader range of pedagogical approaches rather than focusing solely on specific areas of expertise.

Table 6: One-Way Analysis of Variance (ANOVA) Results for Significant Difference in Pedagogical Competence of Maritime Professional Instructors When Grouped According to Length of Teaching Experience, Educational Attainment, and Classification

Categories	n	Mean	Sd	F <sub>(2,71)</sub>	p-value	Interpretation
<b>Length of Teaching Experience</b>						
Short (1-10 years)	55	4.51	.37258	2.256	.113	Not Significant
Mid (11-22 years)	15	4.34	.65792			
Long (23-33 years)	5	4.80	.12247			
<b>Educational Attainment</b>						
Bachelor	50	4.48	.36832	0.957	0.389	Not Significant
Masteral	22	4.57	.47713			
Doctoral	3	4.22	1.1071			
<b>Classification</b>						
Deck	43	4.53	.35992	2.338	0.104	Not Significant
Engine	23	4.37	.58900			
Allied	9	4.71	.16202			

## Enhancement Program Designed to Enhance the Teaching Strategies of the Maritime Professional Instructors

### Enhancement Program for Maritime Professional Instructors

Rationale: This enhancement program aims to optimize teaching strategies for maritime professional instructors based on identified findings to address challenges and further elevate pedagogical competence. By refining instructional methods and addressing obstacles, instructors can enhance student engagement, learning outcomes, and overall teaching effectiveness in Maritime Higher Education Institutions.

## OBJECTIVES

The following are the objectives of the enhancement program to enhance the teaching strategies of maritime instructors:

1. To increase utilization of high-frequency teaching strategies.
2. To enhance technological integration in teaching practices.
3. To improve pedagogical competence and assessment practices.

### Continuous Evaluation

Assess the program’s impact regularly through feedback mechanisms, performance evaluations, and student outcomes to ensure effectiveness and relevance.

Table 7: Enhancement Program Designed to Enhance the Teaching Strategies of the Maritime Professional Instructors

Objective	Program or Activities	Implementing Strategies	Person(s) Involved	Time Frame	Success Indicator
Improve Pedagogical Competence and Assessment Practices	Workshop and mentorship programs on the use of role playing, case studies, project-based learning, reflections, and journal writing as teaching strategies.	<ol style="list-style-type: none"> <li>1. Conduct seminar-workshop on the use of the identified teaching strategies in terms of:</li> <li>2. Alignment of assessment in the ILOs;</li> <li>3. Drafting of rubrics and mechanics;</li> <li>4. Actual conduct of the Activity.</li> <li>5. Peer Teaching. A professional instructor who opts to choose role-playing will team teach with a general education instructor who will prepare for the rubrics and mechanics while the technical aspect such as scenarios will be prepared by the professional instructor.</li> <li>6. Mentoring the mentor. Instructor may ask a general education instructor to mentor them to make 2-3 guide questions for reflection or journal writing based on their topic including rubric and mechanics.</li> <li>7. Encourage the use of questioning, collaborative learning, and project-based learning techniques</li> </ol>	HR Faculty Deans Program Heads	1 year	Enhanced pedagogical competence and assessment practices demonstrated through improved teaching effectiveness, higher student engagement, and better alignment of assessments with Intended Learning Outcomes (ILOs).

Objective	Program or Activities	Implementing Strategies	Person(s) Involved	Time Frame	Success Indicator
Enhance Technological Integration in Teaching Strategies	Training workshops on the use of technology in teaching.	<ol style="list-style-type: none"> <li>1. Conduct assessment on specific technological training needs.</li> <li>2. Provide hands-on training on the use of power point presentation as to standard font size, graphics and how to imbed videos.</li> <li>3. Recommend training workshops on the use of simulators and other technology use in teaching.</li> </ol>	IT Department, Trainers	Ongoing	Successful technological integration in teaching strategies, as evidenced by increased proficiency and confidence among instructors in using technology.

## DISCUSSION

The significance of the results regarding the pedagogical competence of maritime professional instructors lies in their implications for both educational practice and policy within maritime education. The findings underscore that factors such as teaching experience, educational attainment, and specific classification do not significantly influence instructors' effectiveness in teaching. This challenges common assumptions that more experience or higher degrees automatically equate to better pedagogical skills, suggesting that other elements, such as motivation, engagement, and reflective practices, play critical roles in enhancing teaching competence.

In the context of existing literature, such as the study by Vujičić et al. (2020), this research reinforces the idea that the effectiveness of instructors is multifaceted and cannot be solely attributed to years of experience or educational qualifications. By highlighting the importance of practical teaching skills and industry expertise, the study aligns with the broader discourse on teacher effectiveness, which emphasizes the need for continuous professional development and training in instructional methods. This insight can help educators and policymakers focus on fostering a more holistic approach to instructor development that prioritizes engagement and practical skills over mere qualifications.

Moreover, the results suggest that educational institutions can effectively utilize the diverse pedagogical strengths of instructors across various classifications (Deck, Engine, and Allied) to enhance student learning experiences. This finding encourages a collaborative and interdisciplinary approach in maritime education, where instructors can share best practices and instructional strategies. By leveraging the collective expertise of instructors from different areas, educational programs can provide a richer and more varied learning environment, ultimately contributing to the overall success of maritime training and the development of competent professionals in the field.

## CONCLUSION

The research findings highlight the necessity of a balanced approach in maritime education that combines traditional teaching methods, such as lectures and assessments, with interactive and practical strategies. This integration is essential for creating comprehensive learning experiences that cater for the diverse needs of students. Maritime professional instructors are recognized for their commendable level of pedagogical competence, reflecting their ability to inspire students, foster engaging learning environments, and adapt their teaching strategies effectively. Their sustained performance at high levels across various teaching dimensions underscores their capability to facilitate meaningful learning experiences, which is crucial for student success.

However, the study also identifies significant challenges that maritime professional instructors face, which may hinder their teaching effectiveness and overall well-being. Issues such as financial constraints, limited resources and skills, and fatigue from inadequate sleep can impede instructors' concentration and focus, ultimately affecting their energy levels and alertness. Additionally, the research reveals that there are no significant differences in pedagogical competence based on rank, length of teaching experience, highest educational attainment, or classification of instructors. This finding suggests that factors like teaching experience, training in instructional methods, and industry expertise may be more influential in developing effective teaching skills rather than rank or educational background. By acknowledging these insights, educational institutions can better support instructors in addressing their challenges while promoting professional development that enhances pedagogical effectiveness.

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