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Maritime Schools' Deployment of Completed Classroom Instruction (CCI) Students in Domestic Vessels: Basis for Government Support for Shipboard Training Program

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Abstract

Maritime Schools deployment of Completed Classroom Instruction (CCI) Students is not easy as pie now a days. Government Agencies (CHED and MARINA) may close school down MHEIs if not meet the required minimum deployment percentage in which the government through Government Agencies warrants the franchise of the Maritime Programs. Therefore, indeed it needs a support from the government and collaboration among maritime stakeholders for sustainability.

This study seeks to develop a support from the government basis for proposed shipboard training program based on the MHEIs' deployment rate of CCI Students, MHEIs' compliance, and MHEIs initiatives to improve deployment rate, and government support program to MHEIs as influenced by maritime programs (BSTM and BSMarE) and Academic Years 2017-2018, 2018-2019, 2019-2020, 2020-2021, and 2021-2022.

Introduction

Maritime Schools deployment of Completed Classroom Instruction (CCI) Students is not easy as pie now a days. Government Agencies (CHED and MARINA) may close school down MHEIs if not meet the required minimum deployment percentage in which the government through Government Agencies warrants the franchise of the Maritime Programs. Therefore, indeed it needs a support from the government and collaboration among maritime stakeholders for sustainability. This study sought to develop a support from the government basis for proposed shipboard training program based on the MHEIs' deployment rate of CCI Students, MHEIs' compliance, and MHEIs initiatives to improve deployment rate, and government support program to MHEIs as influenced by maritime programs (BSTM and BSMarE) and Academic Years 2017-2018, 2018-2019, 2019-2020, 2020-2021, and 2021-2022. This study answers the following research questions: (1) What is the total number of CCI Students in MHEIs in Western Visayas as an entire group and when categorized according to Maritime Program and Academic Year, (2)What is the MHEIs' compliance with Government Agencies (CHED and MARINA) directives towards requiring domestic ships to have cadets on board based on the minimum required deployment percentage, (3) What initiatives are undertaken by MHEIs to improve the deployment rate of CCI Students as required in the JCMMC No.01 Series 2023 Section 30, (4) What is the support that MHEIs receive from the government to address the deployment failure based on the minimum required deployment percentage as per JCMMC No.01 Series 2023 Section 30, and (5) How can the Shipboard

Training Program be developed by the Philippine Government to address the issue of low deployment rate among Cadets who have Completed Classroom Instruction (CCI) students in JCMMC No.01 Series 2023 Section 30? The increasing number of institutions over the years likewise contributed to the expanding total of maritime CCI students who are awaiting their deployment. The Maritime Industry Authority (MARINA), the single maritime administration in the Philippines responsible for the implementation of the 1978 STCW Convention, released specific provisions that include Philippine-registered ships of 500 gross tonnage or more and/or powered by main propulsion machinery of 750 kW propulsion power or more are the required vessels to accommodate cadets for onboard training (OBT). In effect, not all vessels can serve as deployment ships for maritime cadets. (MARINA Circular No. Memorandum Circular No. SC 2022-01) This study is supported on the systems theory that began with Von Bertalaffy's (1956) General Systems Theory has where he defined "system" as a complex of interacting elements (Mele et al., 2009). The system theories are often composed of components that include inputs, process, outputs, and feedback. With the parts working together, system theories can be utilized as the base for the new kinds-of organizations like project management organization. The Input variables of the study are Maritime Programs and Academic Year. Quantitative Dependent variables were MHEIs Deployment Rate of CCI Students. Qualitative Dependent variables were MHEIs Compliance and MHEIs' Initiatives to Improve Deployment Rate. Further, the Output is Proposed Government Support for Shipboard Training Program.

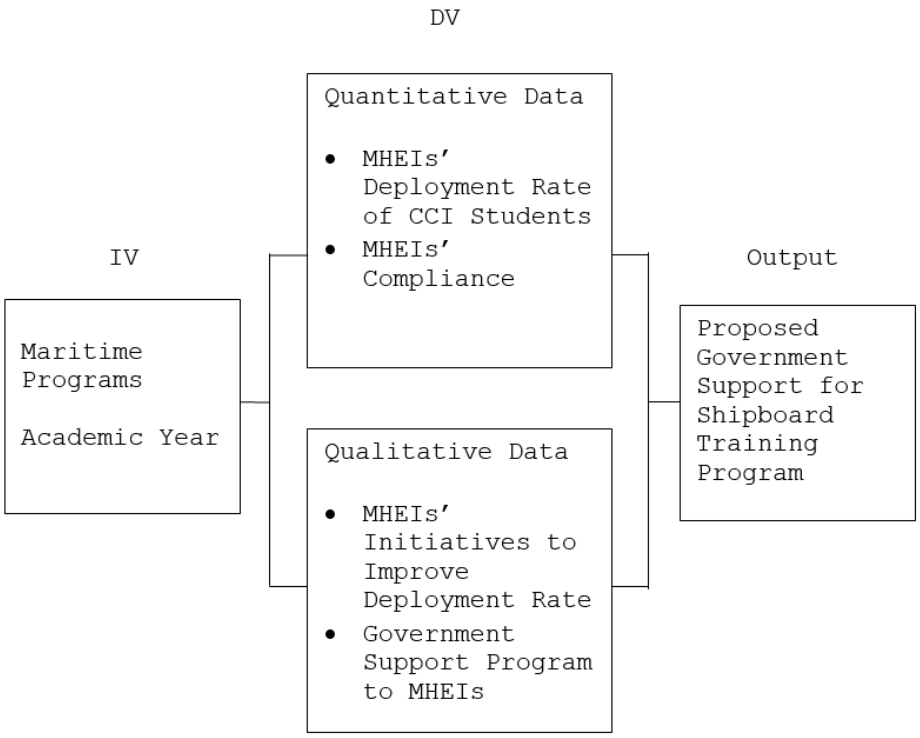

Figure 1. Proposed government support for shipboard training program based on the MHEIs' deployment rate of CCI Students, MHEIs' compliance and MHEIs initiatives to improve deployment rate, government support program to MHEIs as influenced by maritime programs and academic year.

Method

This study was conducted using the Convergent Parallel Mixed-Methods research design by Demir and Pismel (2018). The research process can be interpreted as qualitative and quantitative and can take many forms and be adopted for different types of result arise from a quantitative study (Morse, 1991). A

convergent parallel design entails was utilized by the researcher for the quantitative and qualitative data in the same phase of research process weighs the method equally, analyzes the two components independently, and interprets the results together (Creswell & Clark, 2011). *Qualitative Study Group and Quantitative Study Group* data explained the MHEIs' compliance with Government Agencies (CHED and MARINA) directives towards requiring domestic ships to have cadets on board based on the minimum required percentage. The basis standards were the Joint CHED-MARINA Memorandum Circular No.01 Series of 2023 Section 30. In this study, no research instrument was used to gather data from the Quantitative Study Group. Instead, the researcher gathered data collected through compiled (derived) data of the respective schools, offices, and companies of CCI Students and Cadets onboard domestic shipping companies in Western Visayas

The participants of this study were divided into two study groups, the *Quantitative Study Group* and the *Qualitative Study Group*.

The participants in the Quantitative Study Group were the CCI Students of Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering BSMarE Programs and those who were deployed as Deck Cadets and Engine Cadets onboard for OBT in a particular class.

The participants in the Qualitative Study Group were interviewees comprising twenty-three (23) key personnel from the MHEIs, two (2) key personnel in the MARINA Regional Office VI, one (1) key personnel in the CHED Regional Office VI and five (5) key personnel in Domestic Shipping Companies Offices.

Table 2. Number of Interviewees

Category	*f*	(*N*)	%
Entire Group	13	13	100
Entire MHEIs Group	10	13	62
Shipping Companies	3	4	77
Governments	2	2	100

Procedure

Quantitative Data

Request for data gathering was sent in advance to the to MHEIs, Government Agencies (CHED and MARINA), and Domestic Shipping Companies in Western Visayas prior approval of the Administrative Head/President and/or Director of the respective institutions. Once approved, it was routed to the designated offices or department of the specified study group participants in this study. The researcher gathered data collected through compiled (derived) data of the respective schools, offices, and companies of CCI Students and Cadets onboard domestic shipping companies in Western Visayas. The quantitative data is gathered from the offices of the respondents were classified according to groups, tabulated, and subjected to simple and appropriate statistical treatment of data.

Qualitative Data

Request for gathering was the same process in the quantitative procedure. Request for data gathering was sent in advance to the to MHEIs, Government Agencies (CHED and MARINA), and Domestic Shipping Companies in Western Visayas prior to the approval of the Admin Head/President and/or Director of the respective institutions. Once approved, it was routed to the designated offices or department of the specified study group participants in this study. Research instructions were given to make sure that the respondents understood the instructions with ease and that all items would be answered properly, with no items left unanswered.

The interviews done face-to-face individually by interviewer and interviewee were recorded and saved the using an audio recorder of a smartphone and then transcribed into written statements. Thereafter the transcripts were read to understand rigorously contrasting ideas with a comprehensive point of view.

Transcription was followed with guidance and supervision of qualitative experts. The narrative transcripts derived from the interview were interpreted using Braun and Clarke (2006). This method provides a six-phase guide which is a very useful framework for conducting this kind of analysis. The researcher moves from one step to the next. This means that the research may move forward and back between the responses, perhaps many times, particularly if dealing with a lot of complex data.

Statistical Treatment of Data

The data gathered from the responses of the two study groups were:

Qualitative data - extracted data from audio recording were transcribed, thematized, and coded.

Quantitative data/Compiled (Derived) data - collected from respondents' offices were processed, analyzed using simple mathematical processes such as total number (N), frequency count (f) and percentage (%) and were compared based on the JCMMC No.01 Series 2023 Section 30 standards.

Descriptive Statistics

Total number (N) -- was used to determine the actual numbers of the respondents in the study.

Frequency count (f) -- was used to determine the distribution of respondents.

Percentage (*%*)-- was determined by computing the OBT deployment based on the total number of students who completed classroom instruction (CCI) for onboard training (OBT) in a particular class.

Result

Table 2 presents the total number of CCI Students among MHEIs in Western Visayas as an entire group and when categorized according to maritime program such as BSTM and BSMarE and academic year (2017-2018, AY 2018-2019, AY 2019-2020, AY 2020-2021, AY 2021-2022). As an entire group, the number of CCI Students was 8899. For maritime programs, the CCI Students from Bachelor of Science in Marine Transportation (BSTM) were 5303 (60%) and the CCI students from Bachelor of Science in Marine Engineering (BSMarE) were 3596 (40%). And when grouped according to five (5) academic years 2017-2018, there were 2113 (24%) CCI students; for 2018-2019, there were 1360 (15%) CCI Students; for 2019-2020 there were 631 (7%) CCI Students; for 2020-2021, there were 2112 or (24%) CCI Students, and for 2021-2022, there are 2683 (30%) CCI students. In the past, not even 50% of CCI Students could go onboard. Mendoza and Valenzuela (2017; as cited in Tang and Bhattacharya, 2021) conceived that on average, the number of enrolled students each year during the 2011–2015 period was about 160,000. As the degree courses take four years to complete, the newly enrolled per year would be more than 40,000.

However, it was reported that less than 20% of them were able to complete their training. One major reason for this was that they could not secure a training berth for shipboard training (Bhattacharya, 2015).

Table 2

Number of Completed Classroom Instruction (CCI) Students When Grouped According to Different Categories

Category	*f*	%
A. Total number CCI Students among MHEIs in Wester Visayas	8899	100
B. Maritime Programs		
BSMT	5303	60
BSMarE	3596	40
C. Academic Year		
2021 – 2022	2683	30
2020 – 2021	2112	24
2019 – 2020	631	7
2018 – 2019	1360	15
2017 – 2018	2113	24

Table 3

MHEIs' Compliance with Deployment Rate in Terms of Number Cadets (Deck and Engine) Deployed over the Number of CCI Students, Their Percentage of Deployment, and the Deployment Status When Grouped According to Maritime Programs and Academic Year When Grouped as to Different MHEIs in Western Visayas

Academic Year	MHEI	No. of Cadets Deployed	No. of CCI Students	% of Deployment	Deployment Status
	MHEI A				
	BSTM	142	343	41	Failed
	BSMarE	80	186	43	Failed
	MHEI B				
	BSMT	84	127	66	Failed
	BSMarE	44	64	69	Failed
	MHEI C				
2021-2022	BSMT	185	663	28	Failed
	BSMarE	-	-	-	-
	MHEI D				
	BSMT	119	300	40	Failed
	BSMarE	80	182	44	Failed
	MHEI E				
	BSMT	-	-	-	-
	BSMarE	194	353	55	Failed
	MHEI A				
	BSTM	250	402	62	Passed
	BSMarE	90	131	69	Passed
	MHEI B				
	BSMT	167	227	74	Passed
	BSMarE	53	75	71	Passed
	MHEI C				
2020-2021	BSMT	357	644	55	Failed
	BSMarE	-	-	-	-
	MHEI D				
	BSMT	155	318	49	Failed
	BSMarE	128	193	66	Passed
	MHEI E				
	BSMT	-	-	-	-
	BSMarE	196	305	64	Passed

2019-2020	BSMT	41	53	77	Passed
	BSMarE	-	-	-	-
	MHEI D				
	BSMT	51	81	63	Passed
	BSMarE	51	79	65	Passed
	MHEI E				
	BSMT	-	-	-	-
	BSMarE	61	120	51	Failed
	MHEI A				
	BSTM	72	118	61	Passed
	BSMarE	64	105	61	Passed
	MHEI B				
	BSMT	54	63	86	Passed
	BSMarE	54	75	72	Passed
	MHEI C				
2018-2019	BSMT	121	165	73	Passed
	BSMarE	-	-	-	-
	MHEI D				
	BSMT	71	121	59	Failed
	BSMarE	87	141	62	Passed
	MHEI E				
	BSMT	-	-	-	-
	BSMarE	162	264	61	Passed
	MHEI A				
	BSTM	237	363	65	
	BSMarE	131	215	61	
	MHEI B				
	BSMT	-	-	-	
	BSMarE	-	-	-	
	MHEI C				
2017-2018	BSMT	450	567	79	
	BSMarE	-	-	-	
	MHEI D				
	BSMT	261	421	62	
	BSMarE	188	275	68	
	MHEI E				
	BSMT	-	-	-	
	BSMarE	248	318	78	
	Total	4881	8899		

Academic Year	Passing Percentage
2021-2022	80%
2020-2021	60%
2019-2020	60%
2018-2019	60%
2017-2018	Not yet stated

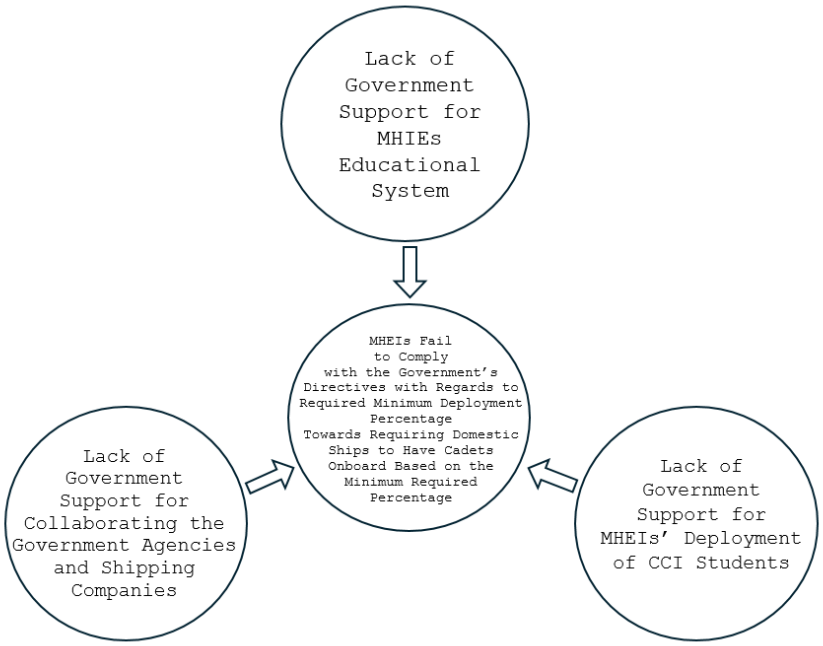

Figure 2 - Themes derived from the qualitative data on MHEIs' challenges in achieving the required minimum deployment percentage.

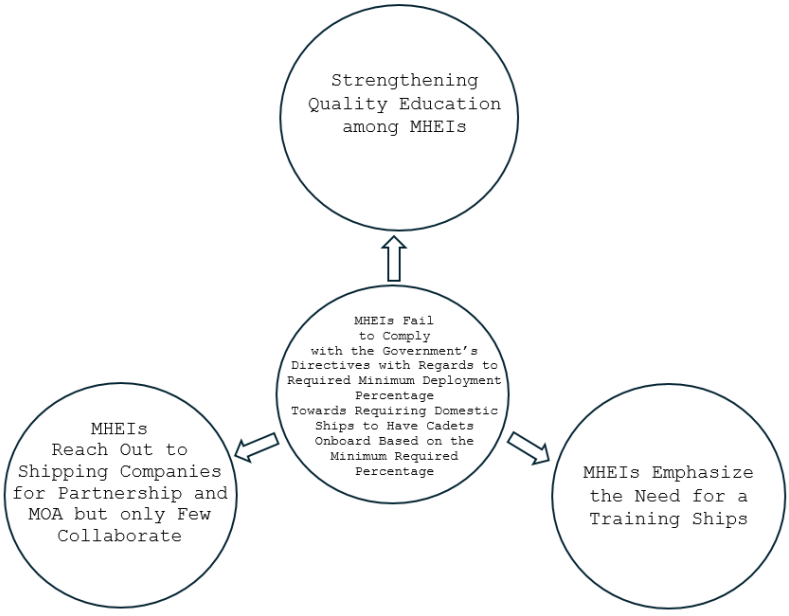

Figure 3 - Themes derived from the Qualitative data on MHEIs' initiatives in attempts to achieve the required minimum deployment percentage

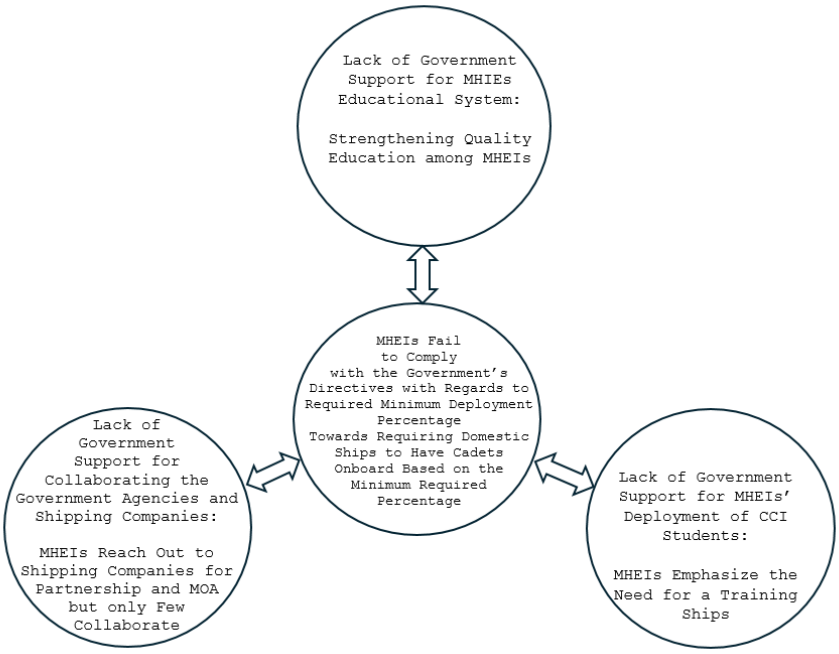

Figure 4 - Themes derived from the Qualitative data on MHEIs' for both challenges and initiatives in attempts to achieve the required minimum deployment percentage

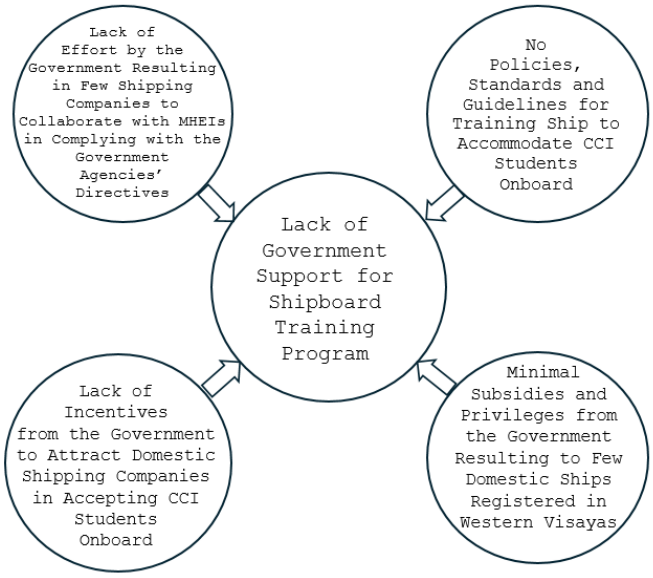

Figure 5 - Consolidated themes that contribute to why Government through Government Agencies (CHED and MARINA) are lacking support for shipboard training program for MHEIs.

Figure 6 shows the paradigm of the proposed shipboard training program for the issue which is the "MHEIs Failed to Comply with the Required Minimum Deployment Percentage" and other factors that come into play as the "Proposed Government Support for Shipboard Training Program" to ensure that the MHEIs Pass the Required Minimum Deployment Percentage.

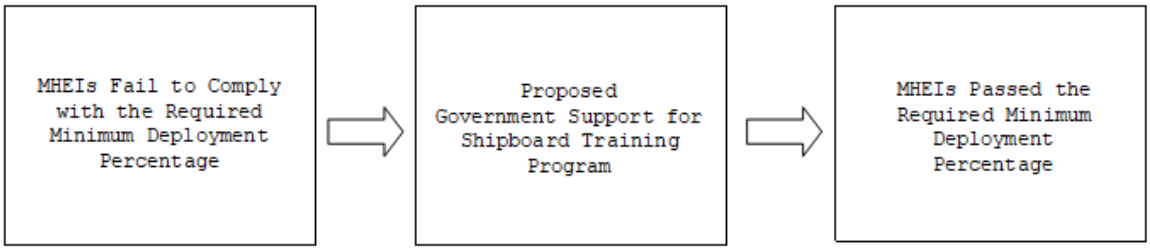

Figure 6 - Proposed Government Support for Shipboard

Table 4 Proposed Government Support for Shipboard Training Program matrix					
Matrix for the Proposed Government Support for Shipboard Training Program					
TOPIC	**OBJECTIVE**	**ACTIVITIES**	**PERSON RESPONSIBLE**	**BUDGET**	**REMARKS**
Industry Partnerships and MOAs	To establish more collaboration with different stakeholders	Courtesy call and visits the stake holders for MOA signing	All Stakeholders: MHEIs' Government Agencies and Domestic Shipping Companies	5,000,000,000.00	Done through Collaborations
Strengthening Quality Education	To enhance quality education and facility	Workshops, Seminars and Laboratory Instructional Equipment	Dean, and Head of the Institution	3,000,000,000.00	Every Five years period
Qualifications, Standards and Guidelines for Training Ship Registration	To structure the qualification Policies and Standards and Guidelines for Training Ship	Creating Implementing, Evaluating and Feedback	MARINA's Administrator, Ship Owner and Head of the Institution	5,000,000.00	Until change in ownership, decommissioned,constructivity or total loss
To increase subsidies, lowering	To attract Domestic Shipping	Give Loans, Discounts, Privileges	Government through Senates	5,000,000,000.00	Yearly

the port dues so that will attract Domestic Shipping Companies.	Companies for collaboration in the deployment off CCI Students for OBT				
Registration of Domestic Vessels in Western Visayas	To encourage Domestic Shipping Companies to register their vessels here in Western Visayas	To encourage Domestic Shipping Companies to register their vessels in Western Visayas through lower taxes and other MOOE.	MARINA's MIDP Specialist	1,000,000.00	Until change in ownership, decommissioned, constructivity or total loss
To elevate the guidelines for OBT to become imposing directives	Be able to strongly tie-up the MHEIs and Domestic Shipping Companies in the deployment of CCI Students onboard	Need to study the compliance status of MHEIs	MARINA Administrator	50,000.00	Revision of the circular is needed
Subsidize the acquisition of Training Ships	More Training Ships await at hand for CCI Students	Senate Conference	Senate	1,000,000,000,000	Done through National Economic and Development Authority (NEDA)

Stagger the highly minimum deployment percentage	To gradually adjust to the changes in the imposed directives	Meetings with all the Maritime Stake-holders	All Maritime Stakeholders	100,000	Needed to consider by the government

Discussion

The Maritime Higher Education Institutions (MHEIs) Compliance with Government Agencies (CHED and MARINA) Directives Towards Requiring Domestic Ships to Have Cadets Onboard Based on the Minimum Required Percentage, data showed that the MHEIs in Western Visayas "failed" to comply. For the academic year 2021-2021, since the Government Agencies (CHED-MARINA) had increased with the minimum deployment percentage from sixty percent (60%) to eighty percent (80%), results showed that all of the MHIES in Western Visayas "failed." Further, as with the previous academic years such as Academic Years 2020-2021, 2019-2020, 2018-2019, there were some noticeable MHEIs that passed the required minimum deployment percentage since the Government Agencies (CHED-MARINA) were not yet able to increase the said requirements. Subsequently, it is important to note that the MHEIs were having difficulty in achieving the required minimum deployment percentage and need support from the government to engage Domestic Shipping Companies in collaborating with MHEIs in facilitating the CCI Students for OBT. The Maritime Higher Education Institutions (MHEIs) implemented measures such as strengthening monitoring programs, conducting house-to-house visits, and establishing cadetship programs to improve the employability of their graduates. They also actively marketed their CCI Students to shipping companies (Del Rosario, 2020). The MHEIs emphasized that the government is lacked support specially in the form of shipboard training program to address the Completed Classroom Instruction (CCI) low deployment rate of the MHEIs (Joint CHED-MARINA Circular N0.01 Series 2023 Section 30). The government through Government Agencies (CHED and MA-RINA) as overseeing authority such as the Domestic Shipping and Maritime Education and Training (MET) has something do with the creation of shipboard training program in the country (Joint CHED-MARINA Circular N0.01 Series 2023 Section 30). Further, through thorough investigation, the following factors emerged why the government through Government Agencies (CHED and MARINA) lacked support in the form of training ships. The lack of government support for shipboard training program comes associated with the following factors: (1) lack of effort by the government resulting in few Shipping Companies to collaborate with MHEIs in complying with the Government Agencies' Directives, (2) no policies, standards, and guidelines for training ship to accommodate CCI Students onboard, (3) lack of incentives from the government to at-tract Domestic Shipping Companies in accepting CCI Students onboard and, (4) minimal subsidies and privileges from the government resulting in few Domestic Ships registered in Western Visayas.

Conclusions

Based on the findings, the following conclusions were drawn: MHIEs failed to comply with Government Agencies (CHED and MARINA) directives because of the increased required minimum deployment percentage directives which there is lack of support from the government side as to the implemented requirements. With the initiative MHEIs, Maritime Schools find measures to improve their deployment

rate of CCI Students to somehow alleviate the burden. All the initiatives made need support from the government for the MHEIs' to continue in this endeavor. As to the support of the government in terms of government training ships, it is lacking and needs to improve. The government had deficit based on the following fac-tors: "lack of effort by the government resulting in few Shipping Companies to collaborate with MHEIs in complying the Government Agencies' Directives; "no policies, standards and guidelines for training ships to accommodate CCI Students onboard"; "lack of incentives from the government to attract Domestic Shipping Companies in accepting CCI Students onboard"; and lastly, "minimal subsidies and privileges from the government resulting in few Domestic Ships registered in Western Visayas." All of these factors intertwine with the dwindling support from the government for a shipboard training program, as evidence why the MHEIs were failed to the comply with government directives.

Implications

The findings of this research have brought about certain implications for related concepts and practices. Government support through Government Agencies (CHED and MARINA) warrants the continuity of the operation of the maritime stakeholders such as the Maritime Higher Education Institutions and Shipping Companies. On the other hand, requirements set of policies, standards, and guidelines imposed by the governing body mainly by different stakeholders in the maritime sectors especially the MHEIs and the Domestic Shipping Companies. By doing so, should be complied with stakeholders may have a smooth sailing operation in the maritime industry.

Recommendations

In connection with the obtained findings and given conclusions, the following recommendations recommendation are advanced: (1) To structure out the qualification requirement for training ships through conceptualizing the policies, standards, and guidelines for training ship to accommodate CCI Students Onboard, Therefore, should be an established accommodation and training for cadets onboard during their cadet-ship program and more CCI students could be deployed onboard as a whole, (2) More incentives should be given Domestic Shipping Companies so they would accept CCI students for onboard training, thereby increasing the number of CCI students onboard for OBT in Domestic Shipping Companies, (3) The MARINA Memorandum Circulars No. SC 2022-01, entitled "Guidelines for the Onboard Training of Cadets on Philippine-Registered Ships Engaged in Domestic Shipping" should be strengthen elevate as "Policies, Standards, and Guidelines for the Onboard Training of Cadets on Philippine-Registered Ships Engaged in Domestic Shipping", thereby, giving more incentive and strengthening the partnerships of MHEIs and Ship-ping Companies in Western Visayas in facilitating the deployment of CCI Students for OBT, (4) Subsidies should be increase, by lowering port dues to attract Domestic Shipping Companies. So that more of ships would be home-ported or registered in Western Visayas, (5) The current allowable number of cadets onboard for both engine and deck cadet position should be increase. Therefore, more CCCI students can migrate as cadets onboard., (6) The acquisition of training ship should be subsidized so that there world more training ships at hand, and (7) The highly increasing required minimum deployment percentage should be staggered so that, MHEIs could adopt, adjust gradually and catch up with their deployment rates lapses.

Details on the Proposed Deployment Enhancement Program

The proposed deployment programs are for the MHEIs for different maritime programs across county. The structure, coursework, and field experiences of pre-service programs are important to consider when designing or reforming seafaring training because they all contribute to the level of preparation. Classroom instruction in Maritime Schools teaches students the theory, design, operation, and maintenance of deck equipment and engine room machineries as well as applied navigational skills, safety, and environmental awareness aside from the sea internship in large commercial vessels in order for students to gain further practical experience in a real-life setting. CCI students are encouraged to seek internships that will bolster their skill sets and refine their interests. Knowing well that our country supplies a great number of seafarers around the world, it is humbly proposed through this study that maritime institutions should strengthen their onboard training program for future seafarers to be fully equipped and ready to face the most challenging world of seafaring. As gleaned from the study, CCI students are exposed to a challenging world hence need first to undergo OBT prior to continuing their BS degree program. Therefore, they must first establish enhancement in shipboard training program. Thus, this shipboard training program is hereby proposed.

Objectives:

1. To establish more collaboration with different stakeholders.
2. To enhance quality education and facility.
3. To craft the qualification Policies and Standards and Guidelines for Training Ship.
4. To attract Domestic Shipping Companies for collaboration in the deployment of CCI Students for OBT.
5. To structure the qualification Policies and Standards, and Guidelines for Training Ship
6. To encourage Domestic Shipping Companies to register their vessels here in Western Visayas.
7. Be able to strongly tie-up the MHEIs and Domestic Shipping Companies in the deployment of CCI Students onboard.
8. More Training Ships await on hand for CCI students.
9. To gradually adjust to the changes in the imposed directives.

Expected Outputs/Results

The expected output of this program includes additional knowledge and skills of maritime students who are future seafarers on the kind of life that awaits them on board the ship. It will also improve the deployment rate of the CCI students in MHEIs in Western Visayas and in the country as well. Therefore, it creates opportunities for CCI students to continue their dream as a globally competitive world seafarers for the future through onboard training. This program will be beneficial to the BSME and BSMT students who have completed their academic requirements leading to the degree of Bachelor of Science in Marine Engineering and Bachelor of Science in Marine Transportation, MHEIs, and all Maritime Industry stakeholders in the Philippines since seafaring is the primary source of revenue in the country. A subsidy from the government is required in pursuing and facilitating the deployment the CCI students onboard training. The CHED and MARINA need to monitor thoroughly the compliance status of the MHEIs and improve the Policies, Standards, and Guidelines. There is need to structure out the qualification of training so that there will be registered training ships. to strengthen the partnerships of MHEIs and Domestic Shipping Companies, give incentives and privileges, such as loans and lower port dues so that more

Domestic Ship-ping Companies will be attracted to register in Western Visayas. There is also needed to subsidize the procurement of training ships through the National Economic and Development Authority (NEDA). Lastly, it will need a hand-on-hand collab-oration is needed among the different Maritime Stakeholders in the country.

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