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Full Mission Bridge Simulation: Competence of Grade 11 Maritime Track Students

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ABSTRACT

This study is using the descriptive analysis. This study was conducted at the Iloilo State College of Fisheries, Tiwi, Barotac Nuevo, Iloilo. Purposive sampling was used in this study. The respondents of this study consisted of the 42 Maritime Track Grade 11 students. The data were gathered from January to March 2017 through assessment briefing, assessment familiarization, monitoring and actual execution and assessment de-briefing. Based on the results of the study in table 1 in terms of operational skills majority of the student's answer can manipulate in question number 1, 2 and 4. While number 3, 5, and 6 majority of the students answered cannot manipulate. It implies that not all students mastered the operation of bridge equipment. While in table 2 in terms of berthing the vessel under various conditions of wind, tide and current and without tugs majority of them can manipulate. In table 3 in terms of main engine propulsion safely and Proficiently majority of them can manipulate and table 4 in terms of maneuvering and propulsion characteristic of common types of ship with special reference to stopping distance and turning circles at various draft and speed majority of them can manipulate. Based on the results of the study it shows that the competence of the Maritime Track Grade 11 students they are not mastered the operation of equipment in bridge and we need more instructors that has a 6.10 IMO Model Course – Training Program for Instructors and Assessors Conducting Simulator Based Training and Assessment and need intervention.

1. Introduction.

In a bid to further boost the country's maritime education, the Department of Education (DepEd) has crafted a new curriculum primary designed for students who wish to pursue a career in the shipping industry. "

The maritime curriculum, which was divided into two specializations, will be taught to incoming senior high school (Grade 11 and 12) students where they will have the options to work after graduation or to pursue further maritime education in college. They will be qualified for a job in the maritime industry after graduating and acquiring required certification.

Pursuant to Republic Act (RA) No. 10533 or the Enhanced Basic Education Act of 2013, the Department of Education (DepEd) will start the nationwide implementation of the Senior High School (SHS) Program with Grade 11 in School Year 2016-2017 followed by Grade 12 in School Year 2017-2018.

In keeping with the DepEd's mandate to make the curriculum contextualized, global, learner-centered, and responsive to the needs of local industries and the labor market, it has undertaken consultations with other national government agencies and stakeholders to offer an effective and enhanced basic education curriculum. One such collaboration is with the Maritime Industry Authority (MARINA) because the DepEd acknowledges and sees the increasing demand of seafarers in the international and local maritime industry; hence, it has collaborated with MARINA to offer maritime specializations in Senior High School.

Moreover, under Republic Act No. 10635, the MARINA serves as the single Maritime Administration responsible for the implementation and enforcement of the 1978 International Convention on Standards of Training, Certification, and Watch-

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keeping (STCW) for Seafarers, as amended, and international agreements or covenants related thereto.

Therefore, the monitoring of the SHS maritime specializations will be conducted jointly by the DepEd and MARINA in accordance with the rules and procedures as provided in this joint memorandum circular.

In 2010, the Conference of Parties to the STCW Convention was held in Manila and Amendments updating the Standards of Competence required of marine deck and engineering officers at the operational level particularly, in light of learning technologies, new training and certification requirements and methodologies, medical fitness standard for seafarers among others, and ultimately for shipping companies to have a safe, secure and efficient shipping operation on cleaner ocean was considered. Today, simulator training given by maritime schools and academes is part of the basic training of maritime professionals.

The importance of Full Mission Bridge Simulator in the Maritime industry is significant in training maritime students to be skillful in maneuvering the ship to develop professional skills through simulator-based training like shiphandling and manuevering on the Full Mission Bridge Simulator will help the maritime students in their desire to become a deck officer.

This study aimed to determine the Full Mission Bridge Simulation Competency of the Grade 11 Maritime Track students of Iloilo State College of Fisheries.

Specifically, this study will meet answer the following objectives:

1. To determine knowledge and operational skills in terms of:
   (a) Steering wheel
   (b) Gyro Compass Repeater
   (c) ECDIS
   (d) Maneuvering console
   (e) ARPA/Radar
   (f) Chart Room
2. To determine the Maritime Track Grade 11 students competency on:
   (a) Berthing the vessel under various conditions of wind tide and current without tugs.
   (b) Operate the Main engine propulsion safely and proficiently.
   (c) Maneuvering and propulsion characteristic of common types of ship with special reference to stopping distance and turning circles at various draft and speed.

2. Methodology.

2.1. Research Design.

This study used the descriptive method of research. Descriptive research is conclusive in nature, as opposed to exploratory.

2.2. Locale of the Study.

This study was conducted to Maritime Track Grade 11 students of Iloilo State College of Fisheries, Tiwi, Barotac Nuevo, Iloilo who were enrolled 2nd semester of academic year 2017-2018.

2.3. Respondents of the Study.

The respondents of the study were the 42 Maritime Track Grade 11 students of Iloilo State College of Fisheries, Tiwi, Barotac Nuevo, Iloilo, enrolled 2nd semester academic year 2017-2018.

2.4. Sample Size.

A total of 42 population of the Maritime Track Grade 11 for SY 2017-2018 taking MET 103 with Descriptive title: Navigational Watch 2, were considered as respondents of the Study.

2.5. Sampling Techniques.

Purposive sampling was used since the study considered all the Grade 11 Maritime Track enrolled for school year 2017-2018 2nd Semester.

2.6. Research Instrument.

In gathering the necessary data to determine the skills and competence to maneuver the ship using Full Mission Bridge Simulator, the researcher conducted practical assessment in the course MET 103 (Navigational Watch 2).

2.7. Data Gathering Procedures.

The researcher conduct assessment briefing, assessment familiarization, monitoring and actual execution of assessment and de-briefing.

2.8. Data Analysis.

The data gathered were subjected to manual statistical test. The statistical tool used was, frequency and percentage.

3. Results.

Full Mission Bridge Simulation Competence of Grade 11 Maritime Track Students.

Table 1: The frequency and percentage distribution on Full Mission Bridge Simulation Competency of the Maritime Track Students in terms operational skills.

		Can manipulate		Cannot manipulate	
		f	%	f	%
1	Steering wheel	30	71.43	12	28.57
2	Gyro Compass Repeater	25	59.52	17	40.48
3	ECDIS monitor	20	47.62	22	52.38
4	Maneuvering Console	25	59.52	17	40.48
5	ARPA/Radar	19	45.24	23	54.75
6	Chart Room	20	47.62	22	52.38

Source: Author.

In table 1, in terms of operational skills in steering wheel 30 can manipulate, 12 cannot manipulate, gyro compass repeater 25 can manipulate, 17 cannot manipulate, ECDIS monitor 20 can manipulate 22 cannot manipulate, maneuvering console 25 can manipulate 17 cannot manipulate, ARPA/Radar 19 can manipulate 21 cannot manipulate and chart room 20 can manipulate 22 cannot manipulate.

Table 2: Frequency and percentage distribution of Maritime Track students Competency in terms of berthing the vessel under various conditions of wind, tide and current and without tugs.

		Can manipulate		Cannot manipulate	
		f	%	f	%
1	Bow thruster check and tested prior departure	31	73.81	11	26.19
2	Ample order of casting off mooring lines	25	59.52	17	40.48
3	Monitor traffic by means of acquiring targets on RADAR/ARPA	30	71.43	12	28.57

Source: Author.

In table 2 in terms of berthing the vessel under various conditions of wind, tide and current and without tugs. Bow thruster check and tested prior departure 31 can manipulate 11 cannot manipulate, Ample order of casting off mooring lines 25 can manipulate 17 cannot manipulate, Monitor traffic by means of acquiring, targets on RADAR/ARPA 30 can manipulate 12 cannot manipulate.

Table 3: Frequency and percentage distribution of Maritime Track students Competency in terms of main engine propulsion safely and proficiently.

		Can manipulate		Cannot manipulate	
		t	%	t	%
1	Operate engine telegraph due regards to change of speed	27	64.29	15	35.71
2	M/E tested ahead and astern prior sailing	30	71.43	12	28.57

Source: Author.

In table 3 in terms of main engine propulsion safely and proficiently. Operate engine telegraph due regards to change of speed 27 can manipulate 15 cannot manipulate, M/E tested ahead and astern prior sailing 30 can manipulate 12 cannot manipulate.

Table 4: Frequency and percentage distribution of Maritime Track students Competency in terms of maneuvering and propulsion characteristic of common types of ship with special reference to stopping distance and turning circles at various draft and speed.

		Yes		No	
		Can manipulate	%	Cannot manipulate	%
1	Helm command and execution due regards to maneuver	25	59.52	17	40.48

Source: Author.

In table 4 in terms of maneuvering and propulsion characteristic of common types of ship with special reference to stopping distance and turning circles at various draft and speed. Helm command and execution due regard to maneuver 25 can manipulate 17 cannot manipulate.

Conclusions.

1. Based on the results of the study in table 1 in terms of operational skills majority of the students answer can manipulate in question number 1, 2 and 4. While number 3, 5, and 6 majority of the students answered cannot manipulate. It implies that not all students mastered the operation of bridge equipment.
2. Based on the results of the study in table 2 in terms of berthing the vessel under various conditions of wind, tide and current and without tugs majority of them can manipulate.
3. Based on the results of the study in table 3 in terms of main engine propulsion safely and Proficiently majority of them can manipulate.
4. Based on the results of the study in table 4 in terms of maneuvering and propulsion characteristic of common types of ship with special reference to stopping distance and turning circles at various draft and speed majority of them can manipulate.

Recomendations.

1. Need intervention on the operational skills of students.
2. All instructors must have a IMO Model Course 6.10 - Training Program for Instructors and Assessors Conducting Simulator Based Training and Assessment.
3. The school administrator must support the needs of Maritime program to meet the requirements on the laboratory.

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