ISSN-3028-0680

University *of the* Visayas

# JOURNAL of MARITIME STUDIES

Volume 1, December 2023


The Official Publication of the College of Maritime Education

JOURNAL OF MARITIME STUDIES ISSN 30280680
Volume 1, Issue 1
December 2023

# JOURNAL OF MARITIME STUDIES

All of these research articles are published by Journal of Maritime Studies and aligned to the research contributions thematic areas under UNSDG. The JMS endeavors to foster scholarly discourse, promote interdisciplinary collaboration, and contribute to the advancement of knowledge in maritime studies.



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Published by College of Maritime Education , University of the Visayas
Address: Corner D. Jakosalem & Colon Street, Pari-an Cebu City, Philippines
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# JOURNAL OF MARITIME STUDIES (JMS)

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| Life on Land and Below Water | Agriculture, Aquatic and Natural Resources |
| Societal Impact | Knowledge, Attitude and Behavior<br>Equity and Human Rights<br>Socio-economic Studies<br>History, Arts, Culture, and Sports |
| Quality Education | Institutional Sustainability<br>Mathematics, Language, and Performing and Visual Arts<br>Inclusive Nation Building Pedagogies in Philippine Education System (Kto12 and HEI Studies) |
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Volume 1, Issue 1
December 2023

# Level of Satisfation Among BSMT Students Using Full Bridge Simulator

Agustin Betcher[1], Marit Alfonz Dela Victoria[1], James Nichol Edaño[1], Jonas Hancil Lor[1], Steven Lim[1], Kris Lorenz Menchavez[1], Josie Marianne Parot[1], Celerio Aurita[2], Robert Maluya[2]

**College of Maritime Education - University of the Visayas**

**ABSTRACT**

*Maritime schools must have the most equipped, if not the best, laboratories where students can practice or do simulation activities. The researchers will use a Quantitative descriptive research design. The descriptive research design involves observing and describing the behavior of a subject without influencing it in any way. This is the best design for the study since the researchers aimed to know the respondents' satisfaction level in using the full bridge simulator laboratory. The satisfaction level of the respondents of their experience with the simulator is high, with a general weighted mean of 4.40 which means that the respondents are generally very satisfied with their experience with the bridge simulator. With the result, it could be implied that factors like quality equipment and facilities management affect the students' satisfaction level towards the activities. The simulation exercises students have experienced are categorized as the most useful. It implies that maritime cadets have helpful insight into the laboratory. The level of satisfaction with laboratory facilities among marine engineering students, which signifies the bridge simulators as real contemplations in building up the maritime students' capability strongly supports this study's results.*

***Keywords*:** Training, Software Simulator, Training Staff

## INTRODUCTION

The Philippines has been a steady supplier of maritime professionals for decades, and its popularity among young adults has never lost its luster. Proud parents would do everything for their children to be enrolled in prestigious maritime schools expecting them to be trained well and to be prepared when they go on board. It is said that the maritime profession is more practical than theoretical. Thereby, maritime schools must have the most equipped, if not the best, laboratories where students can practice or do simulation activities. The question is, do maritime education providers meet these?

There have been a number of them in recent years maritime schools that were closed due to non-compliance with the requirements set by CHED-MARINA in fulfilling their clientele's needs. These requirements were established as a standard to give the students quality education. It has been found out that most deficiencies lie in the facilities and equipment area.

Dotong (2014) reiterated the importance of physical plants and facilities to improve students' skills in managing equipment

and machinery needed for their respective fields of expertise. Making these

mandatory for every educational program to be used by the students is necessary for improving students' competence and confidence.

It has turned into a typical perception that there were issues influencing the understudy's fulfillment, for example, there were individuals who are not satisfied while they are in the Bridge Simulator Room. The organization is inclined toward minimal effort, which prompted disappointments in administration regarding the Bridge Simulator Room. This is viewed as an exploration hole. To address the hole, the researchers went to overview the strategy for examining quantitative research to evaluate the level of satisfaction in the Bridge Simulator room. So that at the end of this study, the researcher will suggest improvements to the student's satisfaction on how to improve the Bridge Simulator Room and maintain the drive quality of instruction.

## METHODOLOGY

### Research Design

The researchers used a quantitative descriptive analysis model. This is the best design for the analysis because the researchers aimed to learn the respondents ' satisfaction level with the full bridge simulator laboratory.

### Objectives

This research intends to determine the satisfaction level in using the full bridge simulator among 3rd year BSMT students in the University of the Visayas in the SY 2019-2020.

The following sub-questions are to be answered:

1. What was the Bridge Simulator satisfaction level among the marine transportation cadets?
2. What were the most valuable exercises they have experienced in the Bridge Simulator?
3. Which guidelines can be made based on the study findings?

### Instrument

The researchers adopted the questionnaire based on the research and books about the level of satisfaction with Laboratory Facilities among Marine Engineering Students by Acolbe et al (2018). And by incorporating part 2, which is the valuable exercise experience of 3rd year maritime transport students in the simulator, we made a move. Acolbe et al (2018).

## RESULTS AND DISCUSSION

This chapter contains the data collated from the 3rd year BSMT students of the University of Visayas. This chapter also discusses the analysis and interprets the data gathered.

Developing and adapting to different teaching methods per the students' specialization and professions is a significant step in educational attainment, like in practical professions. Practical professions require practical skills which need to be developed and honed. Considering Maritime jobs, to shape competent deck officers, compliance to the proper facilities, technology, and equipment as standards for learning and

proficiency are bought into play to enhance educational achievement if properly maneuvered and used. Equipment and different simulators allow the students under the degree to practice, improve their skills and get competent enough as they become professionals.

Bridge simulators provide a wide range of training and professional development courses. The data represents the respondents' satisfaction level with the Bridge simulator exercises.

Table 1. *Most common exercises they have experience in the Bridge Simulator. And if the students are Satisfied or not.*

| **Exercises** | **Weighted Mean** | **Interpretation** |
|---|---|---|
| The Students get enough time and frequency in using the Bridge Simulator | 4.44 | Very Satisfied |
| The Simulator Gives Useful experience for future Occupation | 4.50 | Very Satisfied |
| The Simulator is User friendly | 4.51 | Very Satisfied |
| Safety Stickers are present and legible for the users | 4.41 | Very Satisfied |
| The Environment in the Simulator is conducive for learning | 4.31 | Very Satisfied |
| There are clear Standard Operating Procedures in the Bridge Simulator. (Briefing and Debriefing | 4.35 | Very Satisfied |
| Technical Assistance is provided to the cadets in the Bridge Simulator | 4.40 | Very Satisfied |
| Instructors are well experienced | 4.40 | Very Satisfied |
| There is an established arrangement of equipment's inside the Simulator Room | 4.35 | Very Satisfied |
| The Simulator Bridge is Enough for the students to accommodate | 4.42 | Very Satisfied |
| **Weighted Mean** | **4.40** | **Very Satisfied** |

*Legend: Very Dissatisfied=1.00-1.79*
*Somewhat Dissatisfied=1.80-2.59*
*Dissatisfied=2.60-3.39*
*Somewhat Satisfied= 3.40-4.19*
*Very Satisfied= 4.20-5.00*

Table 1 assesses the satisfaction level of the respondents' experience with the Bridge Simulator. With the highest rank weighted mean recorded of 4.51, the respondents are satisfied that the simulator is user-friendly. However, how the environment in the simulator is conducive for the lowest rank is won for learning with a weighted mean of 4.31 and among the others but still implies that the respondents are very satisfied.

Overall, the satisfaction level of the respondents with their experience with the simulator is high, with a general weighted average of 4.40, indicating the

respondents are generally very satisfied with their experience with the bridge

simulator. With the result, it could be implied that possible factors like quality equipment and facilities management affect the students' satisfaction level towards the activities. The level of satisfaction also affects the students' learning, and they may believe that the activities given by their instructors are necessary and geared toward skills development.

The results in table one correlate to the study of Celia C. Lo (2010) on How Student Satisfaction Factors Affect Perceived Learning which signifies how low student satisfaction can indicate the disconnection between the student's skills and the course's objectives. And to be supported by Gruber, Reppel, and Voss (2010) who contended that one way to determine whether students are experiencing effective teaching is to measure their teacher satisfaction and their educational experiences. Student satisfaction is subjective, but it is important to recognize the link that facilitates better learning outcomes between students and professors. With the data and interpretation made in table 1, satisfaction could be an important factor that powers educational attainment in their desired course. This only conveys that high satisfaction levels are good learning as these experiences meet and address what the students perceive to be necessary in their education.

Table 2
*Most useful exercises they have experience in the Bridge Simulator and If this exercise is useful or not.*

| **Exercises** | **Weighted Mean** | **Interpretation** |
|---|---|---|
| Plan and conduct a passage and determine position | 3.85 | Very Useful |
| Maintain a safe navigational watch | 4.22 | Extremely Useful |
| Use of Radar and ARPA for the safety of navigation | 4.09 | Very Useful |
| Use of ECDIS to maintain safety of navigation | 4.15 | Very Useful |
| Respond to emergencies | 4.01 | Very Useful |
| Respond to a distress signal at sea | 3.92 | Very Useful |
| Use the IMO SMCP and use English | 4.04 | Very Useful |
| Transmit and receive information by visual signaling | 4.26 | Extremely Useful |
| Man oeuvre the ship (Williamson's Turn) | 3.99 | Very Useful |
| **General Weighted Mean** | **4.06** | **Very Useful** |

*Legend: 1.0 – 1.79=**Not at all Useful** 1.80-2.59=**Not so Useful** 2.60-3.39=**Somewhat Useful** 3.40-4.19=**Very Useful** 4.20-5.00=**Extremely Useful***

Table 2 assesses the frequency of the numerous activities of respondents using the Bridge Simulator. As shown, Transmitting and receiving information by visual signaling activity received the greatest weighted mean recorded of 4.26 followed by Maintaining a safe navigational watch activity with a weighted mean of 4.22. With their greater weighted means, these two activities equate to the interpretation of "Extremely Useful." On the other hand, the "Plan and conduct a passage and determine position," falls as the lowest with a weighted average of 3.85 but still translated as "Very Useful," as well as the rest of the activities with the bridge simulator.

Generally, with the general weighted mean of 4.06 it can be conceived that the respondents often carry out the activities with the bridge simulator.

Table 2 could be correlated to the study of Hans Martin Bosse, Jonathan Mohr et al. (2015) et al., (2015) on the benefit of repetitive skills training and frequency of expert feedback in the early acquisition of procedural skills**,** which stated that for the successful learning of simulation training skills, repeated training and input are essential.

Deliberate training with occasional input from both high and low-frequency results in a significant increase in learners' early-phase skill acquisition. It only implies that participation frequency affects the skills development of a learner.

This further suggests that training and activities with the simulator and other equipment should be regularly performed. Frequent exposure of the learners to skills development and training allows them to assess their skill gaps and their ability to execute efficiently.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The researchers could infer that the study of Acobe et al. (2018) on the level of satisfaction with laboratory facilities among marine engineering students, which signifies the bridge simulators as real contemplation in building up the capability of the maritime students strongly supports the results of this study.

The respondents' satisfaction level with the bridge simulator exercises received a great percentage, which means they are very satisfied with their experience with the Bridge Simulator. In addition, it was also found out that the activities with the simulator were very useful on the students. Their level of satisfaction which conveys that the simulator is of a good condition and is functional and their experiences with the simulator, it could really help the students' skill development as they prepare for their careers in the future.

### Recommendations

**Maritime Students.** It is suggested to participate in activities wholeheartedly to learn how to maneuver the simulator and other equipment properly. Do not hesitate to ask for help; always observe how to do things correctly to learn from it. Always take precautions while participating and ensure you learn and gain new experience. Every practical activity is necessary and preparatory for your future career.

**Dean of College.** It is suggested to do monthly follow-up and maintenance of the facilities, technologies, and simulators to ensure the optimal function of this equipment, which would also guarantee the safety, efficient teaching, and learning of instructors and learners during operations. Upgrade and provide more facilities would also help the students' education attainment and skill development.

**Full Bridge Simulator Laboratory In-charge.** Walk around the lab and check the simulator's and other equipment's condition daily. Always observe the students as well as the efficacy of the simulator during operations. Do not hesitate to approach the faculty for malfunctions or equipment failures to provide immediate solutions.

**Instructors utilizing the simulator room.** Always observe safety guidelines and conduct. Remember that safety comes first and seek for assistance from the laboratory in-charge. Do not forget to warn the students and never leave them unattended. And more important is to teach the students fairly but surely.

**Future researchers.** In conducting research related to this study, future researchers should look for more variables and emphasize a new purpose of the study. Avoid bias upon researching to produce a reliable and credible study. Look for reliable resources that would anchor your study.

**University of the Visayas.** Do not hesitate to give what the dean suggests for the facility it improves the University by this facility. And do check monthly for inspection of CHED MARINA so that we can maintain the standards of our University.

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JOURNAL OF MARITIME STUDIES ISSN 30280680
Volume 1, Issue 1
December 2023

# Implementation of Outcomes Based Education Standards as Perceived by Maritime Professional Instructors in the University of the Visayas

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## ABSTRACT

*The study examined the extent of implementation of outcome-based education standards as perceived by Maritime professional Instructors in University of the Visayas in terms of attainment of intended vision, mission, curriculum development, instructional delivery, assessment, student advancement, culture, and exit outcomes. A questionnaire was developed to gather information and analyze data using mean, frequency, rank, standard deviation and t-test. The maritime instructors are utilized as respondents in the study. Significant differences were observed on the attainment and relevance of the intended vision, mission, curriculum development, instructional delivery, assessment, student advancement, culture, and exit outcomes.*

***Keyword:*** Outcome-based education, Standards and Implementation

## INTRODUCTION

The educational purpose is to prepare students for potential experiences and learning outcomes, with the most significant being outcome-based education. Maritime education aims to provide learning and knowledge and improve each student's skills and abilities, taking skills and guiding them with positive attitudes and values. The research is all about analyzing the Education practices and standards based on outcomes. This study will help the students decide whether the University of the Visayas College of Maritime Education is introducing Education based on Outcome Criteria.

According to the 2017 CHED Memorandum order 67 series which subjects the revised policies, standards, and guidelines for the Bachelor of Science in Marine transportation and Bachelor of Science in Marine Engineering these policies, standards and guidelines were developed in pursuit of the educational reforms that include the enhanced basic education curriculum through k-12, the New General Education Curriculum, and the ongoing quality assurance of the BSMT and BSMAR-E graduates based on the Philippines Qualifications framework(PQF) Level 6 and International Standards. In accordance with the pertinent provisions of Republic Act (RA) No. 7722 otherwise known as the "Higher Education Act of 1994 "that mandates CHED Memorandum Order No.

2 Series of 2011 that revised the guidelines of Academic program to new more closely to the constitutional provision of academic freedom in all institution of higher learning and Section 13 of RA 7722 and e CMO No. 46 Series of 2012 that advocates the shift to learning competency based policies, standards.

According to William Spady, the father of Outcomes-based Education, Outcome-based Education (OBE) is probably the most exciting and potentially promising curriculum advancement for schools, since it involves the creation of a future-oriented curriculum orientation and involves performance measurement. (Spady, 1987) According to Butler (2004) Simple learning outcomes that learners must show, what learners should actually do with what they know and understand.

Borrows Geysers (1999) defines OBE as an activity, object, output that integrates and represents the ability of a learner to use content, knowledge, ideas, and so on. The CHED Marina and Educators have tried Efficient colleges, whole language, site-based management and continue to strive to introduce innovation after innovation. As educators continue their efforts to improve the standard of maritime schools, they are exploring a range of resources and methods for improving the education, each with their own merits and challenges.

The research gap in this study is that the shortage of knowledge that exists which is a lack of understanding of how to implement innovations of OBE, and keep them going long enough to become institutionalized. Most teachers have taught a conventional teacher-centered approach where students focus on the teacher as a whole. Students may not learn to communicate with other students in this approach; second, their communication skills can suffer, and teacher-centered teaching for students can be boring. They may be wandering their minds, and may miss crucial details. And last but not least, teacher-centered teaching does not encourage students to express themselves.

A school must have a clear mission, to be successful. Educators must have a common vision of what they are trying to achieve (Boyer, 1983) every school should set clearly defined curriculum targets that teachers , students, administrators and parents share widely (Spady, 1987). Outcome-based curriculum demands that educators and other stakeholders concentrate on the programs basic intent and objectives.

This study aims to decide if the University of the Visayas College of Maritime Education has adopted clear Outcome Base Education requirements. This research will also analyze the degree of implementation at the University of the Visayas College of Maritime Education of results-based education.

In this report, the researcher will discuss what correct outcome-based education practices need to be strengthened by evaluating the maritime department's extent of implementation based on outcomes-based education.

## METHODOLOGY

### Research Design

For this research a descriptive research method has been employed. A descriptive

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study has been used to identify aspects of the population or phenomenon studied. Inaddition, quantitative approach would be used to estimate phenomena from a greater number of people using survey methods. It reflects on the effects of a large number of people, rather than on the individuals. The quantitative method includes the collection of reports, opinion polls and questionnaires and the review of the findings to process data.

**Objectives**

The study aimed to determine the Implementation of the Outcomes based Education in the University of the Visayas College of Maritime Education.

Specifically, it sought to answer the following sub questions:

1. What is the level of Implementation of the Outcomes based Education in terms of the Standards of OBE:
    1.1 Vision;
    1.2 Mission;
    1.3Curriculum Development;
    1.4 Instructional Delivery;
    1.5 Assessment;
    1.6 Student Advancement;
    1.7 Culture; and
    1.8 Exit Outcomes?
2. What are the standards of Outcomes based Education that has not implemented in the School?
3. Base on the findings, what recommendation can be drafted?

**Instrument**

The researchers used a questionnaire adapted and updated from a previous and published research study titled "An analysis of results-based educational procedures, expectations, and factors that facilitate the application of the Curriculum By Timothy Gene Hoffman (1996). The adjusted survey questionnaire will be focused on Education-related Expectations of Outcomes. It will be detected and investigators will analyze it. The researchers changed the Likert scale in the questionnaire instead of 7 we only used 5 and it will decide the level of compliance among maritime instructors at the University of the Visayas on the Standards of Outcome-based Education.

## RESULTS AND DISCUSSION

The knowledge gives judgment on the consistency of the activity implemented in the outcome-based education standard. The researchers examined how a newly established program, based on the theory of OBE, had an influence on the core competencies of students in a maritime discipline. Their research methodology uses Qualitative interviews to evaluate that OBE was correctly implemented prior to a quantitative student impact assessment. The result showed that only particular positive learning habits among students experiencing OBE were found that the core competencies of students with little or no OBE experience were not shown to be significantly higher than those.

However, this did not provide unambiguous proof to either support or disprove OBE's validity, and several factors other than the OBE ideology itself were considered plausible triggers.

It also appeared that some teaching staff lacked confidence and expertise in implementing OBE, suggesting a need to

**Table.1 scoring guidelines to determine implementation**

Table.1 Present the scoring criteria used to assess whether the University of the Visayas College of Maritime Education based on results. The lowest is not being implemented at all, and the highest is an advance implementation standard.

| SCALE | INTERPRETATION |
|---|---|
| **1. 1.0-1.80** | Not Implement at all |
| **2. 1.81-2.60** | Low Level Implementation |
| **3. 2.61-3.40** | Medium Level implementation |
| **4. 3.41-4.20** | High Level implementation |
| **5. 4.21-5.00** | Advance Level Implementation |

has been implemented developing a norm

**Table.2. Responses of the vision of the school toward OBE**

| VISION | MEAN | INTERPRETATION |
|---|---|---|
| 1. My school has a vision of how our school should look and operate | 3.70 | High Level of Implemented |
| 2. My school's OBE steering committee oversees the implementation of OBE. | 4.37 | Advanced Implemented |
| **GMW** | **4.0** | **High Level of Implemented** |

Table 2 shows the responses on the vision as an Outcome Base Education. The general weighted mean of the vision of OBE is rated as high level of implementation. This means that the University of the Visayas looks and operates OBE framework as stated in the vision of the university. It has steering committee oversees the implementation of OBE it implies that all faculty and

non-teaching personnel have undergone OBE format that happened in implementation of OBE. It is also strengthened by the faculty members to their students the OBE format through outputs.

**Table 3. Mission**

| MISSION | MEAN | INTERPRETATION |
|---|---|---|
| 1.My school has a written mission statement | 4.08 | High Level of implemented |
| 2. My school has a written mission statement that reflects a commitment to enable all students to be successful | 3.91 | High Level of implemented |
| 3. The staff in my school is committed to the written mission Statement. | 3.70 | High Level of implemented |
| **GWM** | **3.89** | **High Level of implemented** |

Table 3 shows the responses on the vision as an Outcome Base Education. The general weighted mean of the mission of OBE is rated as high level of implemented. This means that the University of the Visayas College of Maritime Education has a written mission statement that the university builds and embraces a sustainable research culture that can lead student success. The university needs to balance the parent interests, the local community, political pressures, and a constant pressure on time and resources. It implies that the faculty, non-teaching personnel, and students reflect commitment to OBE format.

**Table 4. Curriculum Development**

| CURRICULUM DEVELOPMENT | MEAN | INTERPRETATION |
|---|---|---|
| 1. My school has developed program outcomes | 3.83 | High Level of Implemented |
| 2. My school has developed program outcomes for each discipline area | 3.83 | High Level of Implemented |
| 3. My school has developed program outcomes that support the exit outcomes. | 3.33 | High Level of Implemented |
| 4. I have developed grade level/course outcomes. | 3.66 | High Level of Implemented |
| 5. I have developed grade level/course outcomes that support the program outcomes | 3.66 | High Level of Implemented |
| 6. I have developed outcome that support my grade level/course outcomes, for each unit or segment of instruction that I teach | 3.75 | High Level of Implemented |
| 7. The curriculum I utilize has been revised by matching it to my course/grade level outcomes to enable students to master my course/grade level outcomes. | 4.32 | High Level of Implemented |
| **GMW** | **4.05** | **High Level of Implemented** |

Table 4 shows the responses on the curriculum development as an Outcome Base Education. The general weighted mean on the OBE curriculum development is rated as a high level of implementation. It means that the University of the Visayas College of Maritime Education has developed program outcomes that support exit outcomes since the CHED-Marina alter the old curriculum year 2015-2016 into new curriculum year 2017-2018 for the student prospectus. The College of Maritime Education follows the prospectus in new curriculum year 2017-2018 wherein the minor subjects are more related in maritime, allowing students to expand their knowledge and skills onboard. It implies that the faculty reflects commitment to OBE format.

Table 5 shows the responses on the instructional delivery as an Outcome Base Education. The general weighted mean of the mission of OBE is rated as high level of implemented.This means that they provide students multiple

**Table 5. Instructional Delivery**

| INSTRUCTIONAL DELIVERY | MEAN | INTERPRETATION |
|---|---|---|
| 1. I provide students multiple opportunities to master important objectives. | 4.16 | High Level of Implemented |
| 2. I provide corrective instruction for students who do not initially master important objectives. | 4.37 | High Level of Implemented |
| 3. In my school, teachers base grade level promotion on the student ability to demonstrate the appropriate outcomes. | 4.04 | High Level of Implemented |
| 4. In my school, teachers strive to assure that all students successfully demonstrate all units, course/grade level and program outcomes. | 4.25 | Advance Implemented |
| **GMW** | **4.20** | **High Level of Implemented** |

The responses show that in the University of the Visayas College of Maritime Education, teachers strive to assure that all students successfully demonstrate all units, course/grade level and program outcomes has mean of 4.25 which is advance implemented because the maritime instructor from major subject to minor subject are securing that every maritime students must acquire complete knowledge, understanding and skill in the class.

opportunities to master important objectives has mean highly implement

**Table 6. Assessment**

| Assessment | MEAN | INTERPRETATION |
|---|---|---|
| 1. I have developed performance (authentic) assessment activities. | 4.41 | Advance implemented |
| 2. I utilize performance assessment activities to measure student achievement. | 4.41 | Advance implemented |
| 3.I utilize performance assessment activities that place students in real life situations | 4.29 | Advance implemented |
| 4. I assess students based on the outcomes which the students are required to demonstrate. | 3.91 | High Level of Implemented |
| 5. My school has revised our student report card system so that it is based on our outcomes. | 3.75 | High Level of Implemented |
| 6. I use criterion standards to grade students instead of a ranking system. | 4.08 | High Level of Implemented |
| 7. My students can improve their grade by continuing to work beyond the normal grading period. | 4.08 | High Level of Implemented |
| **GMW** | **4.13** | **High Level of Implemented** |

Table 6 shows that the responses on the assessment. The general weighted mean of the assessment of OBE is rated as high level of implemented. It means that they developed performance (authentic) assessment activities with a mean of 4.41 which is advance implemented because most of the maritime instructor will give examination, actual laboratory, and oral evaluation in every maritime student.

The responses utilize performance assessment activities to measure student achievement with a mean of 4.41, which is advance implemented because most of the maritime instructors will conduct actual situation in the bridge room and engine room to scale the student knowledge. The responses assess students based on the outcomes which the students are required to demonstrate has mean of 3.91 which is highly implemented because most of the maritime instructor will correct the students while performing the

rules of road since they slowly adapt outcome based.

The responses use the criterion standards to grade students instead of a ranking system has mean of 4.08 which is highly implemented because most of the maritime instructor used the grading percentage to evaluate the student performance.

**Table 7. Student Advancement**

| Student Advancement | **MEAN** | **INTERPRETATION** |
|---|---|---|
| 1. My students pursue new units of instruction when they master objectives, or I offer enrichment activities to them | 4.15 | High Level of Implemented |
| 2. My students are allowed to test out of a course for full credit, or advance a grade level, if they can demonstrate the appropriate outcomes. | 4.15 | High Level of Implemented |
| 3. I communicate the results of student's ability to demonstrate course/grade level outcomes, to parents. | 4.20 | High Level of Implemented |
| 4. My school communicates the results of student's ability to demonstrate outcomes, to the general public. | 3.95 | High Level of Implemented |
| **GMW** | **4.13** | **High Level of Implemented** |

Table 7 shows the responses on that student advancement. The general weighted mean of the student advancement of OBE is rated as high level of implemented that the maritime students pursue new units of instruction when they master objectives or instructor offer enrichment activities to them has mean of 4.15 which is highly implemented because most of the maritime instructor will proceed another set of discussion or the instructor will proceed the laboratory to enhance the student knowledge.

It also shows that the maritime students are allowed to test out of a course for full credit, or advance a grade level, if they can demonstrate the appropriate outcomes has mean of 4.15 which is highly implemented because most of the maritime instructor will give exempted to those student that can successfully perform in the bridge simulator and give plus points in the final examination.

The responses show that they communicate the results of student's ability to demonstrate course/grade level outcomes, to parents has mean of 4.20 which is highly implemented because there are some
maritime students that their parents are monitoring their grades which is most of the maritime instructor will honestly tell the performance of their child.

Table 8. Culture

| CULTURE | MEAN | INTERPRETATION |
|---|---|---|
| 1. My school strives to eliminate rules and procedures that interfere with student success. | 4.16 | High Level of Implemented |
| 2. My school strives to establish a climate that promotes high performance of all students. | 3.62 | High Level of Implemented |
| 3. My school strives to establish a climate that promotes high performance of all staff. | 4.04 | High Level of Implemented |
| **GMW** | **3.9** | **High Level of Implemented** |

Table 8 shows the responses on the culture that the University of the Visayas College of Maritime Education strives to eliminate rules and procedures that interfere with student success has mean 4.16 which is highly implemented because of the students saying enrollment is going on classes never mind most of the maritime instructor follow the schedule in regards to class opening so that the students will come on time. It also shows that the university strives to establish a climate that promotes high performance of all students with a mean of 3.62, which is a high level of implementation because most of the maritime instructors are advocating the student to follow the schedule since that is very important onboard .

**Table 9. Exit outcome**

| EXIT OUTCOME | MEAN | INTERPRETATION |
|---|---|---|
| 1. My school has developed clearly defined exit out comes. | 3.58 | High Level of Implemented |
| 2. My school has developed clearly defined exit outcomes with input from public | 3.79 | High Level of Implemented |
| 3. My school utilizes exit outcomes that students must demonstrate, or requires that an intervention plan will be developed before they can advance. | 3.66 | High Level of Implemented |
| **GWM** | **3.67** | **High Level of Implemented** |

Table 9 shows the responses on the exit outcomes that the University of the Visayas College of Maritime Education has developed clearly defined exit out comes has mean of 3.58 which is highly implemented because according to Shipboard Training Officer (STO) in the year 2015-2016 60% of graduated maritime students is already onboard. The table also show that the university utilizes exit outcomes that students must demonstrate, or requires that an intervention plan will be developed before they can advance has mean of 3.66 which is highly implemented because according to STO the maritime student will undergo

the examination after apprenticeship for bachelor degree(BS). It implies that the faculty reflects commitment to OBE format.

Table 10 Demonstrates the overview implementation result of the high level of implementation of performance oriented education standards. Since the written task representing an initiative to ensure success for all students is executed at a high level. The University of the Visayas College of Maritime Education utilizes the exit outcomes that every maritime student must demonstrate, or requires the intervention plan will be developed before they can advance has interpretation of highly implemented.

The curriculum developed program results and grade/course results for each discipline has been strongly applied, so that they have been updated in compliance with course / grade results, so that students have mastered the outcomes of class/grade levels. The strive to assure that all students successfully demonstrate all unit, course/grade level and program outcomes is high level implemented because the responses provide corrective instruction for students who do not initially master important objectives to demonstrate the appropriate outcomes in curriculum development. The answers provide corrective instruction for students who initially do not master major objectives, which means that the instructional delivery to the students is clearly carried out Instead of a ranking system, the criterion standards were used for graduates and the revised student reporting system so that the evaluation results are based on a high degree of application.

| OBE STANDARD | MEAN | RANK | INTERPRETATION |
|---|---|---|---|
| **1 .MISSION** | 3.89 | 7 | High Level of Implemented |
| **2. EXIT OUTCOMES** | 3.67 | 8 | High Level of Implemented |
| **3CURRICULUM DEVELOPMENNT** | 4.05 | 4 | High Level of Implemented |
| **4.INSTRUCTIONAL DELIVERY** | 4.20 | 1 | High Level of Implemented |
| **5.ASSESSMENT** | 4.13 | 2 | High Level of Implemented |
| **6.STUDENT ADVANCEMENT** | 4.10 | 3 | High Level of Implemented |
| **7.CULTURE** | 3.9 | 6 | High Level of Implemented |
| **8.VISION** | 4.03 | 5 | High Level of Implemented |
| **GRAND TOTAL MEAN** | **3.99** | **High Level of Implemented** | |

The answers allowed testing the entire credit or grade if they can demonstrate the appropriate results are implemented to a high degree and communicating to the

 ISSN 30280680

parents the results of the student's ability to demonstrate the outcomes of the class / grade. In culture, the answers have a high level of meaning, as they seek to eliminate rules and procedures that influence the success of the students. The monitoring system records the results showed by students and checks curricula systematically to ensure that our results support a high level of understanding, reviewing the class / group and the unit results to ensure relevance.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The researchers concluded that as teachers, they did their part in adapting their teaching to the new curriculum. The successful execution of OBE creates some positive results for students and staff. Your knowledge and curriculum are very strong, so you are now using it as your basis for your training. A successful balance occurs as teachers build a more clearly established course emphasis to teach what they are studying and evaluate what they are teaching. This leads to an assumption that university students are now exposed and willing to achieve positive results-based education experiences and activities. You will now have the expertise, creativity and experience to train you for your future workplace. Perhaps, effective leadership is the most critical factor for the successful implementation of OBE. Students now exercise not only their intellectual elements, but also in real-life application of concepts. The goals of the University of the Visayas are to become good individuals.

### Recommendations

Following recommendations from the results and conclusion of the study are presented to the following persons or institutions, respectively and respectfully.

**Maritime Instructors.** The researchers suggest that seafarers should be conscious of the program, since it demonstrates that it is beneficial for the student and has the potential to provide clear evidence in its learning. In addition, this program helps to assess each student's comprehensive skills.

**Maritime Students.** The researchers suggest that maritime students learn more about outcomes in order to understand the curricula and follow the learning and teaching method effectively in the classroom. Sea students should be more conscious of the value of this program in their future skills and knowledge.

**Institution.** The researchers propose that the OBE learning system be further applied, so many students may be brighter. The program assists students in the workplace.

**Researchers.** This study will also benefit us researchers, as a marine student, the student is able to fully understand the value of teaching and learning.

**Future Researchers.** The researchers recommend that the future researcher concentrate on the implementation of the findings in all the University's

departments that facilitate the learning growth.

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JOURNAL OF MARITIME STUDIES ISSN 30280680
Volume 1, Issue 1
December 2023

# Health Inventory Tool Among Bachelor of Science in Marine Engineering Graduating Student's Illness

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## ABSTRACT

*Health is a condition of complete physical, mental and social well-being, not just the lack of disease or illness. This study uses a systematic quantitative method of science. A descriptive analysis describes only the relations between variables. This study aimed to identify the prevalent illnesses/diseases from deployment that affect graduating BSMAR-E students and to provide the demographic profile of the respondents. As amended, the International Convention on the Education, Certification and Watchkeeping of Seafarers (STCW) 1978 of the International Maritime Organization (IMO) specifies that all seafarers possess a certificate issued pursuant to the provisions of the Convention. A person serving at sea shall also hold a valid medical certificate issued pursuant to Regulation I/9 and Section A-I/9 of the STCW Code. We remain susceptible to disease with all attempts by regulatory bodies to raise awareness of health problems and implement policies to help BSMAR-E graduate students preserve their well-being.*

***Keywords:*** Health Inventory, Department of Health, World of Health, International Maritime Organization, International Labor Organization

## INTRODUCTION

The shipping industry is now one of the fastest growing industries. It has also become a primary target for workers because it is a highly profitable global operation. Seafarers are among the world's bravest men to take such a high-risk role. Most Filipinos who take up this job face problems affecting their entire career. (Malakauskiene,2006).

The term "physically fit" sometimes evokes the picture of a person who performs even his daily routines with vigor and vigor while still retaining sufficient strength to continue pursuing leisure time. Keeping healthy and fit means having enough energy to aggressively and alertly implement your daily routines and programmers, thus trying to keep enough space for your discretionary income (Ibach, 2010). Therefore, keeping fit and healthy always

guarantees mental, emotional and psychological health. In order to capitalize a well-fit person, these variables need to produce significant results. It is very important to be safe and physically fit for everybody, especially students, because this can accurately determine their life time experience job and conclude that they are qualified to do the job.

Each job demands a specific level of profession that the students must follow to undertake any desired occupation. There will be many different areas that involve significant reasonable level safety requirements, but there are also areas with very strict health standards. The first one falls into the marine engineering sector. An Engine Trainee must maintain to pursue this position and ensure that he was always adequately capable and willing to fulfill the tasks, obligations and responsibilities assigned to him on board the ship. Medical examinations are being carried out to verify this, which is the basis of this study. (Synergy Group, 2013; Petrick, n.d.)

## METHODOLOGY

### Research Design

This work benefits from a concisely quantitative analysis model. Descriptive analysis describes only the relationship between variables. The experiment makes room for causality. Descriptive analysis typically needs a sample of hundreds or even thousands of subjects to estimate the relationship between variables accurately; experiments, particularly crossovers, can require only tens of sub-variables. If there is a high turnout rate for a sample randomly selected from a population, predicting the relationship is less likely to be biased. Bias is also less common in experiments in which patients are randomly assigned to therapy and in which patient perception is blind to both participants and researchers. This research aims to classify common diseases that affect the deployment of seafarers.

### Objectives

The research aimed to recognize common diseases of graduating students with a Bachelor of Science in Marine Engineering. In particular, the paper also aimed at reacting to the following:

1. What was the Demographic Profile of the BSMAR-E graduates in terms of:
    1.1 Age
    1.2 Civil Status
2. What were the common diseases identified based on health inventory tool?
3. Based on the findings, what recommendations can be proposed?

### Instrument

The researchers used the revised standardized and closed-ended type of survey questionnaires from 10/2014 Maritime Medical Service, Ship Safety Division. The questionnaires were designed based on the problem statement, pre-tested for content validity and adjustment of questionnaire reliability and efficiency prior to actual use.

## RESULTS AND DISCUSSION

This chapter addresses the results of the data obtained from the survey, tabulation and interpretation to which the respondents replied. The purpose of this

study was to recognize common disease that affect BSMAR-E graduating students.

The population goal is 50. They are all BSMAR-E graduate students who are eligible for deployment. In order to be able to undertake this profession, the Engine Cadet must maintain and ensure that he is physically fit and capable of performing the roles, duties and obligations that will be assign to him on board.

**Table 1. Demographic Profile of the respondents**

Age

| Age | f | % | Rank | Interpretation |
|---|---|---|---|---|
| 20-23 | 34 | 70.83% | 2 | Highest |
| 24-27 | 9 | 18.75% | 4 | Higher |
| 28-30 | 5 | 10.42% | 5 | High |
| Total | 48 | 100% | | |

Table 1.1 shows the age of the respondents. It also shows that 70.83% or 34 MAR-E out of 48 respondents are having age of 20-23 years old. There are 9 or 18.75% out of 48 respondents at the age of 24-27 and 5 or 10.42% out of 48 respondents at the age of 28-29. Most respondents are at the legal age to work and ready to pursue their profession. It implies that most of the graduating students follow the ladder of education.

**Table 1.2 Civil Status**

| Civil Status | F | % | Rank | Interpretation |
|---|---|---|---|---|
| Single | 46 | 95.84% | 1 | High |
| Married | 1 | 2.08% | 2.5 | Low |
| Widow | 1 | 2.08% | 2.5 | Low |
| Total | 48 | 100% | | |

Table 1.2 shows the civil status of the respondents. It shows that 95.84% or 46 out of 48 respondents are still single and 2.08% or 1 out of 48 respondents are already married and 1 out of 48 respondents or 2.08% are already widowed. The number of still single seafarers is apparently higher than those who are married. It implies that most of the graduating students prefer single because of social responsibilities of having a family

**1.Visual Aid**

"According to the world report, there are about 2.2 billion people with vision impairments in the world — including those who are blind, but many are not blind but have a weak vision, "said Dr. Andreas Mueller, Regional Advisor to the World Health Organization (WHO) during the successful launch of the World Vision Report on 12 November 2019.

**2. Color vision deficiency**

To become color blind, particularly for deck mariners, is a severe matter for seafarers. Colors are used in various types of signals and therefore, seafarers must be able to

| ILLNESS/DISEASE | F | Rank |
|---|---|---|
| Blood disease | 7 | 15 |
| Cardiovascular | 10 | 7.5 |
| Color Vision | 14 | 3.5 |
| Dental Problems | 14 | 3.5 |
| Dizziness and Unconsciousness | 9 | 10 |
| Diseases of Digestive System | 12 | 5 |
| Diseases of Genito Urinary | 10 | 7.5 |
| Diseases of Locomotor | 5 | 18 |
| Ear Disorder | 8 | 13 |
| Eye Disease | 8 | 13 |
| Frequent Severe Headache | 1 | 52 |
| Hernia | 8 | 13 |
| Infection jaundice | 6 | 16.5 |
| Metabolic Disease | 6 | 16.5 |
| Nyctalopia | 11 | 6 |
| Respiratory Disease | 9 | 10 |
| Sleep Disturbance | 15 | 2 |
| Skin Disease | 9 | 10 |
| Visual Impairment | 15 | 2 |

distinguish one color from another correctly. To be able to guarantee this, seafarers are required to take the 1917 Ishihara Test developed by Dr. Shinobu Ishihara. It is a diagnostic view of the red-green color defects (Bedinghaus, 2014)

**3. Nyctalopia**

Night blindness, or nyctalopia, is where the body cannot adjust to low light conditions, for example at night. Night blindness is not a disease itself, but the consequence of an established eye disorder. The eye must adjust when the illumination is dim. While night blindness adversely affects a person's ability to see in dim light, it does not cause complete blindness. It can cause trouble seeing signs of the road when driving at night. It may also take longer to adjust to the eye when moving from light to dark settings than normal. (November 12, 2019 DOH) Night blindness is a symptom of certain underlying conditions that several factors may cause. The article will speak about signs, potential causes and night blindness remedies. (Aaron Kandola-12/2018)

**4. Nyctalopia**

There are 1,11 million Filipinos with cataract, 400,000 with uncorrected refraction defect, almost 300,000 with glaucoma, and 200,000 with maculopathy. In addition, there are over four million Filipinos living with undiagnosed eye disorders that need to be treated, "the DOH said.

**5. Dental problems**

Oral disease appears to be a serious public health issue in the Philippines. The incidence of dental caries on permanent teeth has usually remained above 90 per cent over the years. About 92.4 per cent of Filipinos suffer from tooth decay (dental caries) and 78% from gum disease (periodontal disease) (DOH, NMEDS 1998). Although these diseases can be avoided, almost every Filipino is affected at some point in your life.

**6. Sleep disturbances**

Sleep disturbances two articles highlight the importance of sleep in this issue of the Journal. The first reiterates the role of obstructive sleep apnea hypertensive patients and how continuous positive airway pressure (CPAP) therapy can boost blood pressure.1 the second, a qualitative analysis of patients and clinicians, reaffirms the need for physicians to be more conscious of the needs of patients and the effects of the sleep problem on their lives.

**7. Cardiovascular diseases**

In the Philippines, cardiovascular (33 percent), cancer (10 percent), diabetes (6 per cent) and chronic respiratory disorders (5 percent) are attributed to deaths that are non-communicable in the Philippines (WHO Country Profile Survey 2014). The National Nutrition Survey (FNRI) of the Food and Nutrition Research Institute concluded that the following behavioral factors have risen in prevalence between 2008 and 2013: diabetes is between 4.8% and 5.4%; adults are overweight between 26.6 and 31.1%, while levels of hypertension have decreased from 25.3 to 22.3% and current adult smokers are between 31.0percent.

**8. Respiratory**

Seafarers of serious communicable disease are prohibited from embarking and needing to undergo medical examinations and complex procedures. Pulmonary tuberculosis (TB) is one

example. Some of the signs include blood coughing, chest pain, tiredness, fever and weight loss. This can be observed by the x-ray of the chest (World Health Organization 2014).

**9. Severe headache**

Headache is an exceedingly common illness, and headache disorders are commonly one of the nervous system's most common diseases. They have a prevalence of 48.9% in the population1. Headache is more common in women and affects individuals of any age, race and social and economic status. The majority of headaches are incredibly poor and have important impacts on the quality of life of a person, thus placing immense costs on health services and the entire economy. Clinicians need guidance on just a small percentage of headache disorders. A primary care physician or general practitioner with a simple clinical diagnosis cannot efficiently treat the vast majority of patients with no particular study needed. Primary headache disorders – migraine, tension headache and cluster headache – constitute nearly 98% of all headaches; however, secondary headaches are important to recognize as they are serious and may be life threatening. A description of the most common symptoms of headache is given in this article. The red flag signs help identify severe causes that need specialists to report urgently. A model that would fit well with the financially troubled National Health Service (NHS) and planned changes to the N Headache Programs is under consideration in the United Kingdom. Annin Neurol at Indian Acad.2012]

**10. Infections**

Bilocation's of bile pigments in the blood of body tissue are yellow in the skin and mucous membranes. The jaundice of cholestasis, which involves reduced bile flow rate, must be separated. Jaundices and cholestasis can coexist with each other or without each other depending on the clinical situation. Although several reports claim that jaundice can be diagnosed with serum bilirubin up to 2 to 2,5 mg / dl, experienced doctors still don't see a yellow skin color until at least 7 to 8 mg / dl of serum bilirubin are present. (N J British Med. 1973) N. J.

**11. Sexually transmitted diseases (STD)**

Sexually transmitted diseases (STDs) are infections that transfer from one person to another through sexual contact. There are over 20 forms of STDs, including chlamydia, genital herpes, gonorrhea, HIV / AIDS, Trichomoniasis, and HPV syphilis. Most STDs affect both males and females, but the health problems they cause can be more serious for females in many cases. If an STD is present in a pregnant woman, it may cause severe health issues for the child. Antibiotics are able to treat bacterial or parasite-caused STDs. There is no remedy for virus-induced STDs, but medications will also help with the symptoms and maintain control of the disease.

**12. Diseases of the Genito-urinary system**

Urinalysis is the examination of urine in physical, chemical and microscopic terms. This requires a lot of research to classify and measure different substances that pass through the urine ("McPherson," 2014).

**13. Diseases of the digestive system**

Digestive diseases are digestive tract disorders that are often referred to as GIs. Food and beverages are divided into small sections during digestion (called nutrients) that can consume the body and act as cell energy and blocks. The gastrointestinal tract comprises the Esophagus (food tube), uterine, small and large intestines, kidneys, pancreas, and gallbladder. Any health issue contained in the digestive tract is a digestive disease. Conditions can be mild to severe. Sometimes, cancer, bowel syndrome and lactose intolerance are some of the common problems. A.D.A.M. (2008-2016). INC.

**14. Metabolic diseases**

A group of disorders that together raise the risk of heart attack, stroke and type 2 diabetes are metabolic syndrome. These signs include elevated blood pressure, high blood sugar, body fat excess around the hips, and excessive cholesterol or triglyceride levels.

Having only one of these disorders does not mean having metabolic syndrome. But it does mean that you are at higher risk of serious illness. And suppose you have more of these disorders. In that case, the risk of complications, including type 2 diabetes and heart disease, will increase even more.

Metabolic syndrome is becoming increasingly common, with as many as one-third of adults in the United States. Suppose you have metabolic syndrome or any of its components. In that case, drastic lifestyle changes can postpone or even prevent serious health problems from occurring. (Clinic Mayo 14 March 2019)

**15. Diseases of the loco-motor system**

Muscles, bones, joints and related tissue, such as tendons and ligaments, are more than 150 affected disorders in the international classification of diseases. Musculoskeletal disorders are more than 150 locomotive-affected. They differ from those that occur unexpectedly, are short-lived in chronic conditions linked to constant pain and failure, including fractures, sprains, and strains. (MOW 10/09) MOW 9/2019

**16. Ear disorders**

Researchers are discovering many causes of audible neuropathy. The cause can, in some cases, include damage to the inner hair cells— sensitive sensory cells in the inner ear that relay sound information to the brain via the nervous system. In many other cases, the cause may include damage to the auditory nerves from the inner hair cells, which transmits sound input to the brain. Several potential causes may include inheritance of genes with mutations or damage to the auditory system, resulting in either defective interactions between the inner hair cells and the auditory nerve (the nerve that leads to the brain from the inner ear), or defective interactions between the inner hair cells. In some situations, a combination of those issues can occur. For the University of Gallaudet. (2018/05/4).

**17. Mental diseases**

A number of diseases of varying symptoms result in a temporary loss of consciousness associated with postural collapse (syncope) by blood flow disruption to the brain. The only common causes of repeated periods of consciousness loss are syncope and seizures. Vasovagal reaction or' common faint' and postural hypertension are both

common syncope causes and benign causes. Cardiac causes, including cardiac rhythm disorders and mechanical obstruction to cardiac production can also cause syncope. Syncope cardiac causes are associated with morbidity and mortality much higher than postural hypertension or fainting. Specific treatment for the multiple cardiac causes of the syncope is available and therefore accurate diagnosis is crucial (AustFam Physician, 2003)

**18. Unconsciousness imbalance**

There are many different blood disorders, and they are treated differently depending on the type and nature of the condition. Over time, some of these may evolve into blood cancers. Just a few people with blood disorders need a stem cell transplant–usually only if all therapies have failed. (2008 Anthony Nolan)

**19. Blood diseases**

The 2013 Report of the Global Burden of Disease (GBD) analyzed skin Global disability and skin disease mortality. To create a systematic, quantified and internally reliable source of health information, the GBD is a collaboration of more than 1000 experts worldwide.1 Based on the Institute for Health Measures and Assessment and sponsored by the Bill and Melinda Gates Foundation, the GBD 2013 provides disability and mortality metrics for illness, injury and risk factors stratified by age, sex, place. Disease burden has been estimated using the Impairment-Adjusted Life Year (DALY) scale, the number of years lost to disease (YLLs) in pluuuu. One DALY is equal to a healthy life lost for one year.4(pp6-7This measuring unit allows for a cross-comparison of different states of disease. GBD's goal is to generate epidemiological data of the highest quality by preserving consistent analytical methods that involve spreading uncertainty, encouraging internal consistency, and allowing iterative revisions over time. New studies and updated techniques are integrated into the increasing GBD edition, creating a 'living' database to inform health, research-oriented and policy decisions. This rolling data set design allows the implementation of new data sources and improvements to the estimation methods. Public Burden of Disease 2013 analyzed in 188 countries, with 306 diseases and accidents. We present findings for 15 dermatological conditions at the GBD as researchers and collaborators (Luc E. Coffeng, MD, PhD6,7; et al 2013)

**20. Cancer**

Hernias in the abdominal wall are normal, with a prevalence of 1.7 percent for all ages and 4 percent for those over 45 years. Inguinal hernias account for 75% of abdominal wall hernias, with a lifetime risk of 27% for males and 3% for females.1 Inguinal hernia repair is one of the most common procedures in general surgery, with rates ranging from 10 % of the population in the United Kingdom to 28% of the population in the United States.2 In England in 2001-2 some 70 000 inguinal hernia repairs were carried out (62 969 primary, 4939 recurrent), taking more than 100 000 hospital bed days. Ninety-five percent of primary care patients are male and the incidence in men rises from 11 per 10,000 years of age 16-24 to 200 per 10,000 years of age 75 or older (BMJ. Feb. 2008)

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The 1978 International Convention on the Education, Qualification and Watchkeeping of Seafarers (STCW) of the International Maritime Organization (IMO) states, as amended, that any seafarer holding a certificate issued pursuant to the provisions of the Convention serving atsea shall also hold a valid medical certificate issued pursuant to Regulations I/9 and S with the certificate issued under the provisions of the Convention serving at sea.

### Recommendations

According to the result of the gathered data and the conclusion, the researchers would recommend the following:

**Seafarers.** They should encourage themselves to have a healthy diet and regular exercise. Also, remember that it is very important for them to discipline and educate themselves on health issues. Also keep on reading health articles for new techniques, read magazines, and always exercise regularly.

**Shipping Companies.** They should encourage their crew onboard to always eat healthy and have a regular exercise. Also support the crew by providing them the necessary tools to keep them physically and mentally fit.

**Maritime Students.** They should be disciplined and conscious about what they put into their mouth if they want a long and successful career. They should always put extra effort into keeping themselves fit, eat healthy and have regular exercise because it is also beneficial for them since they are still completing their academic requirement it could help them is this endeavor because health also affect their studies.

Researchers. They could this information or the result of this study to spread awareness about health concerns and encourage the maritime cadets who are the next or future seafarers to always bear in mind that maritime industry has a very strict policy on health and medical fitness of the seafarers.

**Future Researchers.** They could develop this study for further studies. since this study was survey based, future researchers could also explore other sources data like; clinical lab test results, Pre-employment medical exam results and the like. They could also do another study concerning this to develop a strategic plan to combat diseases.

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JOURNAL OF MARITIME STUDIES ISSN 30280680
Volume 1, Issue 1
December 2023

# Approval Ratings on Accounting Services in UV Main Campus

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## ABSTRACT

*This study explores costumers satisfaction, a measure used to quantify the extent to which a customer is satisfied with a product, service or experience. The researchers used the descriptive method of research with used of a questionnaire as the primary source of data in determining the approval ratings on accounting service in University of the Visayas Main Campus. Second, the writing study demonstrates the subsequent to receiving dissatisfaction, we do find a significant correlation on how students give their approval ratings in accounting service. Their statements provide more disclosures and therefore more useful information for stakeholders. Also, the use of more fair value to the students. Finally, the exact examination on bookkeeping norms affirms better approval rations on accounting service assurance. The relationship comes about to appear a positive relationship between the variables.*

***Keywords:*** Accounting staff, Faculties, Process Flow

## INTRODUCTION

The school's success depends on the accounting department's financial control. The accounting department plays an important role when handling the school's finances in all areas. The management is presented with the real challenge of promoting quality services to the students by allowing feedback and criticism that is a way to improve the services, resulting in the students ' approval ratings.

The student's approval ratings with the accounting department's services are very significant. On the value they receive from such services, they assess their services. The research is therefore conducted with the goal of evaluating the Accounting Services in University of the Visayas, Main Campus.

Many people do not realize the value of the accounting department, to keep the business running smoothly and without delays. This is probably due to the fact that accountants supervise many of the back office activities in a corporation as opposed to marketing, for instance, which is front-line action, in the open and in the flame. The accounting department may also have other roles, but this list gives you a very clear idea of the back office

functions performed by the accounting department.
According to Ramjee (2018) accounting process involves collecting and documenting cash payments for services rendered or products sold by consumers. High value-added services are provided by well-trained people based on (Debely, 2008) and designed to meet the needs of customers by providing tailor-made solutions and maintaining good value relationships. The study's research limitation is that the researchers and participants have an issue with the accounting services, the facilities such as the chair where the students sit comfortably waiting for their number to be called. There is also a question in general about how they treat their clients, the accounting actually has a sluggish work flow, lapses and failures, as the accounting has a ton of teller but only one teller is operating.

It encourages the researcher to research the students ' level of satisfaction at the University of the Visayas. To give the investigator a suggestion on what areas of the school programs we will improve in the accounting.

It has been the concern of the management of accounting to ensure that the students give approval ratings on accounting services through making an evaluation, come up with feed backs and criticisms that would be the basis of the improvement of their services. It could not be avoided that there are lapses and shortcomings, but these are manageable with the responsibilities of the accounting personnel.

## METHODOLOGY

### Research Design

In evaluating the accounting services at the University of the Visayas, Main Campus, and the authors used the descriptive research method using the questionnaire as the primary data source.

### Objectives

The study provides approval ratings on accounting services at the University of the Visayas, Main Campus. The findings will form the basis for the proposed measures for change.

Specifically, it attempts to answer the following questions:
1. What is the profile of the respondents in relation to:
    1.1 Department
2. What is the extent of approval ratings on the model of Kano,Ff:
    2.1 Installations;
    2.2 Customer interaction; and
    2.3 Accessibility?
3. Based on the findings, what steps are suggested to strengthen it?

### Instrument

The instrument in this study is a questionnaire made by a researcher based on Kano's Theory of Customer Satisfaction. The questionnaire shall be divided into two parts. The first part of the questionnaire deals with the profile of the respondents as well as the department. The second part of the questionnaire consists of 9 questions. 3 items for slightly

satisfied, moderately satisfied, and very satisfied. Each of the attributes has three variables to measure: Facilities, Customer Interaction, and Process Flow.

## RESULTS AND DISCUSSION

It covers the study of presentation and interpretation of data in customer interaction, process flow, and accounting facilities at the University of the Visayas Main Campus in this study.

Table 1
***Customer Interaction***

| Statements | CoME MEAN | CCS MEAN | CEA MEAN | COED MEAN | TOTAL | RANK | INTERPRETATION |
|---|---|---|---|---|---|---|---|
| 1. Promotes customer satisfaction attending to their needs and complains. | 2.56 | 2.71 | 2.63 | 2.67 | 2.64 | 5 | VS |
| 2. Identifies the priority needs and problems of the students in paying the accounting. | 2.66 | 2.73 | 2.74 | 2.65 | 2.69 | 2 | VS |
| 3. Allows feed backs and criticisms from the students toward improvement. | 2.56 | 2.76 | 2.75 | 2.64 | 2.67 | 3.5 | VS |
| 4. Ensures the paying process to meet the expectations of the students. | 2.63 | 2.72 | 2.82 | 2.63 | 2.70 | 1 | VS |
| 5. The accounting staffs are knowledgeable and has ability to response in handling questions and request. | 2.67 | 2.65 | 2.68 | 2.71 | 2.67 | 3.5 | VS |
| GENERAL WEIGH MEAN | 2.61 | 2.71 | 2.72 | 2.66 | 2.67 | | VS |

| Lower Limit | Upper Limit | Description |
|---|---|---|
| 1.00 | 1.67 | Slightly Satisfied |
| 1.68 | 2.33 | Moderately Satisfied |
| 2.34 | 3.00 | Very Satisfied |

Table 1 shows number that the communication between customers is graded as Very Satisfied between four colleges, namely the College of Maritime Education, the College of Computer Science, the College of Engineering and Architecture and the College of Education. This ensures that the students deemed to be costumers will be reached above the minimum service. This means that accounting office workers have shown competence in serving students who are paying University of the Visayas tuition fees.

Table 2
***Process Flow***

| Statements | CoME MEAN | CCS MEAN | CEA MEAN | COED MEAN | TOTAL MEAN | RANK | INTERPRETED |
|---|---|---|---|---|---|---|---|
| 1. The accounting committee follows a logical process upon paying. | 2.88 | 2.77 | 2.75 | 2.70 | 2.77 | 1 | VS |
| 2. There are steps to be followed in paying the accounting. | 2.93 | 2.75 | 2.64 | 2.73 | 2.76 | 2 | VS |
| 3. The accounting process makes use of technology to ensure reliable, fast and Accurate system. | 2.83 | 2.67 | 2.68 | 2.70 | 2.72 | 5 | VS |
| 4. The management sees to it that these students follow a line upon paying to the cashier. | 2.87 | 2.68 | 2.78 | 2.62 | 2.73 | 3.5 | VS |
| 5. The management allows change and transition with the accounting process if there is need. | 2.75 | 2.71 | 2.80 | 2.67 | 2.73 | 3.5 | VS |
| GENERAL WEIGH MEAN | 2.85 | 2.71 | 2.73 | 2.68 | 2.74 | | VS |

| ***Lower Limit*** | ***Upper Limit*** | ***Description*** |
|---|---|---|
| *1.00* | *1.67* | *Slightly Satisfied* |
| *1.68* | *2.33* | *Moderately Satisfied* |
| *2.34* | *3.00* | *Very Satisfied* |

Table 2 demonstrates the process flow of accounting services that management provides in the logical payment process using software to ensure a secure, fast and accurate method. College of Maritime Education, College of Computer Science, College of Engineering and Architecture, and College of Education find the system flow of accounting at the University of the Visayas to be Very Satisfied. It means that the University of the Visayas is pursuing students ' wellbeing and happiness as costumers in relation to paying their tuition fees and miscellaneous because the management demonstrates an effective, fast and accurate process.

Table 3. ***Facilities***

| Statements | CoME MEAN | CCS MEAN | CEA MEAN | COED MEAN | TOTAL MEAN | RANK | INTERPRETED |
|---|---|---|---|---|---|---|---|
| 1. Accounting's waiting chair. | 2.74 | 2.77 | 2.58 | 2.72 | 2.70 | 1.5 | VS |
| 2. The accounting entrance is wide and free from obstruction. | 2.58 | 2.80 | 2.74 | 2.67 | 2.69 | 4 | VS |
| 3. Enough teller/Cashiers | 2.91 | 2.57 | 2.62 | 2.71 | 2.70 | 1.5 | VS |
| 4. The accounting's advance technology upon transaction | 2.78 | 2.71 | 2.42 | 2.71 | 2.65 | 5 | VS |
| 5. The accounting's processing time upon payment. | 2.81 | 2.70 | 2.60 | 2.70 | 2.70 | 1.5 | VS |
| GENERAL WEIGH | 2.76 | 2.71 | 2.59 | 2.70 | 2.68 | | VS |

| ***Lower Limit*** | ***Upper Limit*** | ***Description*** |
|---|---|---|
| *1.00* | *1.67* | *Slightly Satisfied* |
| *1.68* | *2.33* | *Moderately Satisfied* |
| *2.34* | *3.00* | *Very Satisfied* |

Table 3 demonstrates that accounting facilities such as waiting chair, advanced technology, spacious and free of interruption are viewed by the University of the Visayas Customers or clients as Very Satisfied. It ensures that above minimum service, the services used and provided by the accounting staff were surpassed. It means the customers are very satisfied.

Table 4
***Summary of tables***

| Customer Interaction | CoME MEAN | CCS MEAN | CEA MEAN | COED MEAN | TOTAL | INTERPRETED |
|---|---|---|---|---|---|---|
| GENERAL WEIGH MEAN Process Flow | 2.61 | 2.71 | 2.72 | 2.66 | 2.67 | VS |
| GENERAL WEIGH MEAN Facilities | 2.85 | 2.71 | 2.73 | 2.68 | 2.74 | VS |
| GEN. WM | 2.76 | 2.71 | 2.59 | 2.70 | 2.68 | VS |

| ***Lower Limit*** | ***Upper Limit*** | ***Description*** |
|---|---|---|
| *1.00* | *1.67* | *Slightly Satisfied* |
| *1.68* | *2.33* | *Moderately Satisfied* |
| *2.34* | *3.00* | *Very Satisfied* |

Table 4 shows the summary of the rated results of Customer Interaction, Process Flow, and Facilities. The general weigh mean of the customer interaction has a total of 2.67. The general weigh mean of the process flow of accounting services has a total of 2.74, followed by the facilities has a total general weigh mean of 2.68. Interpreted by exceeded above minimum service.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

The researchers conclude and agree the Kano's model on customer satisfaction that most of the clients of the University of the Visayas exceeded the above minimum service.

### Recommendations

From the data gathered results and conclusion made from the study, the following recommendations are respectively and respectfully presented to the following individuals or institution.

**Cashiers and Accountants.** The researcher recommends to School Cashiers and Accountant to continue their good service of the customers or clients, like attending in the working hours on time and good service upon giving advice to the students or customers on how to follow the rules on paying bills.

**Students.** The students also recommend that they continue supporting the services already given by the accounting management.

**School Administration.** The researchers recommend to School Administration to continue their support to the accounting department about their good service, at the same time to improve the accounting facilities and upgrade to be able to give all the good service to the customers or clients.

**Future Researcher.** The researchers would like to recommend the future researchers to investigate if this study is lacking and to improve it. Because this study will be related on the future rate of the accounting service.

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JOURNAL OF MARITIME STUDIES ISSN 30280680
Volume 1, Issue 1
December 2023

# Level of Awareness in Trim and Stability

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## ABSTRACT

*This study is all about the level of awareness in trim and stability among maritime students who enrolled in SEAM 2B at the University of the Visayas. The researchers aim to know their awareness level in terms of different subtopics of ships trim and stability such as Draught Trim and Stability, Cargo Calculations and Cargo Plans, Effect of Trim and Stability of Cargoes, and Ship Stability. This study is focused on the principle of awareness level, as it demonstrates the overall understanding of the topic. The concept of this study will serve as basis in creating the research questionnaire. The researchers developed an analytical questionnaire in this study that consists of 24 questions. In this questionnaire, the 4 different subtopics has 6 questions related to it and experts also verify this. Using the survey method, this study will determine the level of awareness among maritime students. The 110 respondents of this study are the maritime students who took SEAM 2B at the University of the Visayas. The results of this data are tabled using the relative frequency distribution. This study would mostly benefit the students who took Maritime Transportation, the faculty, the institution, the administration and the future researchers to create a better curriculum and the best training foundation for these cadets. The results were counted and tabled after the collection of data. The researchers created their own scale wherein there were 4 (four) level of awareness; Extremely Aware, Moderately Aware, Slightly Aware, and Not Aware. The researchers have interpreted the data and generated the outcome in which they can finally conclude that the maritime students who enrolled in SEAM 2B at the University of the Visayas are Moderately Aware of the subtopics of ships trim and stability.*
*The researchers also mentioned suggestions for the beneficiaries that could be useful for the maritime industry in shaping the best and most successful cadets.*

***Keywords*:** level of awareness, ships trim and stability, maritime students, and survey method

## INTRODUCTION

The University of the Visayas has been offering Bachelor of Science in Marine Transportation since 1980 to incoming freshmen interested in maritime pursuit. The Bachelor of Science in Marine Transportation deals with the study in navigation cargo handling and stowage, controlling the safe operation and care for persons on board the ship at operational level CHED Memorandum Order NO. 67 (2017).

ISSN 30280680

One of the pre-requisites and co-requisites carries that is mandated by the Commission on Higher Education is Trim and Stability. Most of the Bachelor of Science in Maritime Students does not have information that will serve as a guide for students and institutions. In the study of Hanzu-Pazara et. al (2016), that stability of ships is one of the most significant nautical characteristics that has a major effect on the protection of navigation of ships. In maritime accidents with a major effect and danger to safety in navigation, losing stability plays a major role. They reveal that in order to prevent hazardous situations to which the crew vessel and cargo are exposed, continuous training of deck offices is very important.

The aim of this research is to determine the degree of understanding of trim and stability. Nowadays, absence of trim and stability in a ship create wide result to accidents that will lead to severe effects such as loss of goods, vessels, and even lives. This is why this course is offered because it is the basic foundation in designing and constructing ships to prevent accidents.

A major danger to navigation safety in the stability of ships could lead to maritime accidents, which occur inevitably and constantly at sea (Hanzu-Pazara et al, 2016). It would be a positive step in the prevention of maritime accidents to be conscious of the value and use of trim and stability as a maritime student. Students will be directed by knowledge of trim and stability to control the loading, transportation, securing and unloading of loads and their treatment during the voyage when they become seafarers in the future. The firm foundation of measurement and principles of trim and stability will strengthen the safety of the lives of our seafarers, passengers and vessels.
Therefore, the researchers try to address what degree of awareness of the students on the trim and stability of the vessel at the University of the Visayas. Researchers will assess and define potential guidelines to assist the administration, the maritime students and the administration of maritime safety in making appropriate safety decisions and the seafarers in making them aware of them. In addition, data and guidance are the aim of the study being conducted. There are many technologies and simulations nowadays and researchers are aiming to see if maritime students at the University of Visayas have been particularly aware of the vessel's trim and stability in preparation for facing the actual and realistic maritime environment.

## METHODOLOGY

### Research Design

The researchers use the survey method of research to determine maritime students' awareness level. When quantitative data analysis is used, descriptive tests are used to summarize analytical data. The researchers would therefore use the questionnaire as the key data collection method. Descriptive quantitative is a research design to represent the participants in an effective way. More specifically, descriptive research is all about identifying individuals who participate in the research. In this analysis, by descriptive procedure, the results

obtained from the self-made questionnaire are analyzed and interpreted.

**Objectives**

This study aimed to determine the level of awareness on trim and stability.

Specifically, this study also aims to answer the following questions;

1. What is the level of awareness on trim and stability in terms of:
   - 1.1Draught Trim and Stability;
   - 1.2Cargo Calculations and Cargo Plans;
   - 1.3Effect of Trim and Stability of Cargoes; and
   - 1.4 Ship Stability?

2.What are the recommendations that can be drawn based on the findings?

**Instrument**

The researchers made a questionnaire that was used as the primary data collection tool. Two main components of the questionnaire are:

The first part contained statements reflecting the elements of the subject, Trim and Stability. The respondents score each statement according to their level of awareness. Furthermore, a 4-point numeric scale that has the following equivalents corresponds to each answer;

4. (Extremely Awareness) This suggests that the respondent is extremely aware that the statement represents the Trim and Stability subject and that it has been addressed in the classroom environment in all instances.

3. (Moderately Awareness) Implies that the respondent is moderately aware that the statement represents the subject of Trim and Stability and that half of the cases have been addressed in the classroom setting.

2. (Slightly Awareness) This suggests that the respondent is slightly aware that the statement represents the Trim and Stability issue and that in a few cases it has been discussed in the classroom environment.

1. (Not Aware) This means that the respondent is unaware of the argument and that the classroom environment has not been addressed.

The second part contained suggestions from the respondents that are likely to be of great help in improving and advancing the current curriculum structure, especially in the area of trimming and stability.

## RESULTS AND DISCUSSIONS

This chapter presents the result, analysis and interpretation of the data analysis of the data gathered from the 110 respondents who passed SEAM 2B.

The data were collected and then processed in response to the statement of the problem pose in the first chapter of this research. One of the fundamental goals is to determine the level of awareness in trim and stability.

| Subtitle | **Mean** | **Rank** | **Interpretation** |
|---|---|---|---|
| 1. The summer load line mark should not be submerged in a summer zone. | 3.13 | 2 | Moderately Aware |
| 2. A seasonal zone is one that changes its name at different times of the year. | 3.55 | 1 | Extremely Aware |
| 3. A vessel loaded to full draft in a winter zone will have a waterline at the top of the winter load line mark. | 3.10 | 3 | Moderately Aware |
| 4. Distance from the keel to waterline is the draft. | 2.94 | 5 | Moderately Aware |
| 5. The specific gravity of a substance is the ratio between its density and the density of the fresh water. | 3.09 | 4 | Moderately Aware |
| 6. *Ship stability* is an area of naval architecture and *ship* design that deals with how a *ship* is stable. | 2.87 | 6 | Moderately Aware |
| **Total** | **3.11** | | **Moderately Aware** |

***Table 1.*** *Draught Trim and Stability*
*Legend: 4 (Extremely Aware) --- 3.26-4.00 3 (Moderately Aware) -- 2.51-3.25*
*2 (Slightly Aware) -------1.76-2.50 1 (Not Aware) ---------- 1.00-1.75*

This showed the level of awareness on trim and stability in the subtopic draught and stability. The mean score has an total average of 3.11 which means that the 110 students who took the subject seam 2B and participated in answering the questionnaire are moderately aware based on the given criteria. The student was extremely aware of seasonal zone is one that changes its name at different times of the year as it is first in the ranking and moderately aware of the specific gravity of a substance is the ratio between its density and the density of the fresh water since it came last in the ranking.

***Table 2.*** *Calculations and Cargo Plans*

| Exercises | Mean | Rank | Interpretation |
|---|---|---|---|
| 1. An Oil tanker has a Breadth Molded of 39.5m with a Draft molded of 12.75m and a mid-ship area of 496m. Calculate the mid-ship area is 0.9649 m. | 2.96 | 1 | Moderately Aware |
| 2. For a general cargo ship LBP=120 m, Breadth Mld= 120m, draft=8m, displacement 8m. Using the ship surgery, amid-ship portion 10m long is welded into the ship. | 2.96 | 2 | Moderately Aware |
| 3. A container-ship has the following C, values commencing at the base: 0427, 0.504, 0.577, 0.647 and 0.715 at the Summer Load Water line (SLWL). The WPA= C x L x B is 0.575 | 2.74 | 4 | Moderately Aware |
| 4. A vessel of triangular form length 100m, beam 12m, depth 6m is displacing 3030 tonners in water relative density 1.010. The reserve buoyancy is 600. | 2.61 | 6 | Moderately Aware |
| 5. A vessel displacing 18,000 tons has a KG of 50 ft. A crane is use to lift cargo weighing 20 tons from a supply vessel. When lifting, the head of the crane is 150 ft. above the keel. The change in KG is 0.11 | 2.63 | 5 | Moderately Aware |
| 6. Vertical support members used to strengthen bulkheads are called stiffeners. | 2.95 | 3 | Moderately Aware |
| **Total** | **2.80** | | |

*Legend: 4 (Extremely Aware) --- 3.26-4.00 3 (Moderately Aware) -- 2.51-3.25*
*2 (Slightly Aware) -------1.76-2.50 1 (Not Aware) ---------- 1.00-1.75*

This shows the level of awareness on trim and stability in the subtopic cargo calculations and cargo plans. The 110 students who passed the subject seam 2B has a total average of 2.80 making them moderately aware. On the question an oil tanker has a breadth molded of 39.5 with a draft molded of 12.75 and a mid-ship area of 496m.cl calculate the mid-ship area is.9649m. The respondent got a mean of 2.96 making them moderately aware and first in the ranking.

 ISSN 30280680

**Table 3.** *Effect of Trim and Stability of Cargoes*

| Subtitle | Mean | Rank | Interpretation |
|---|---|---|---|
| 1. The Duct Keel is used for carrying pipework. | 3.27 | 3 | Extremely Aware |
| 2. Double bottom constructions are found on large vessels. | 3.20 | 4 | Moderately Aware |
| 3. Panting results from pitching of the vessel. | 3.08 | 6 | Moderately Aware |
| 4. The shell plating at the after end terminate at the stem time. | 3.29 | 2 | Moderately Aware |
| 5. The collision bulkhead must extend to first deck above the load waterline. | 3.30 | 1 | Moderately Aware |
| 6. When using empty double tanks to lower the centre gravity in a vessel in a condition of loll, then the ranks to be filled first narrowest. | 3.15 | 5 | Moderately Aware |
| **Total** | **3.21** | | Moderately Aware |

*Legend: 4 (Extremely Aware) --- 3.26-4.00* *3 (Moderately Aware) -- 2.51-3.25*
*2 (Slightly Aware) -------1.76-2.50* *1 (Not Aware) ---------- 1.00-1.75*

This shows the level of awareness on trim and stability the respondents shows that they are moderately aware on the subtopic effect of trim and stability of cargoes since they got a total average of 3.21 on mean score. Based on the scoring criteria, the respondents are extremely aware of collision bulkhead must extend to first feck above the waterline as they got 3.30 score on mean.

**Table 4.** *Ship Stability*

| Subtitle | Mean | Rank | Interpretation |
|---|---|---|---|
| 1. A stability book is prepared and a freeboard is assigned to a vessel at its initial survey. | 3.36 | 4 | Extremely Aware |
| 2. The Plimsoll Mark on a vessel is used to determine its freeboard. | 3.40 | 2 | Extremely Aware |
| 3. Load line is checked after loading to ensure that a vessel has adequate reserve buoyancy. | 3.46 | 1 | Extremely Aware |
| 4. The intact buoyancy of a vessel describes the volume of spaces below the waterline. | 3.40 | 3 | Extremely Aware |
| 5. Metacentric height is a measure of a vessel's initial stability. | 3.26 | 5 | Extremely Aware |
| 6. To increase the in flooding your vessel could suffer without sinking, you could increase reserve buoyancy. | 3.19 | 6 | Moderately Aware |
| **Total** | **3.34** | | Extremely Aware |

*Legend: 4 (Extremely Aware) --- 3.26-4.00* *3 (Moderately Aware) -- 2.51-3.25*
*2 (Slightly Aware) -------1.76-2.50* *1 (Not Aware) ---------- 1.00-1.75*

This shows the level of awareness on trim and stability with the subtopic of ship stability shows that the 110 respondents who passed the subject seam 2B and participated in answering the survey are extremely aware based on the scoring criteria as they got a total mean average of 3.34.

## CONCLUSION AND RECOMMENDATIONS

### Conclusion

Generally, the researchers reached their purpose in creating this study wherein they sought out to determine the level of awareness in trim and stability in the University of the Visayas. This would be the first step in improving the institutions approach towards molding competitive and world class cadets in the maritime industry. This would provide the advantages to the studies beneficiaries. And now in this study, the researchers concluded that the maritime students who enrolled in Seam 2B are moderately aware of the following subtopic; draught trim and stability, cargo calculations and cargo plans, effect of trim and stability of cargoes and ship stability, in other words, the maritime students who took Seam 2in the University of the Visayas are moderately aware in Trim and Stability.

They have enough awareness about this topic which makes capable of performing well in the field. The researchers also created a list of recommendations to help develop supplemental antecedents and give more focus towards the development of these young cadets.

These recommendations could be very helpful in making our goals achieved. The achievement of these young cadets are also the achievement of the institution.

The researchers think that the maritime students should aim higher to become the best, that there is still space to improve, thus the beneficiaries should help hand in hand to innovate more effective approach so that the maritime students could be very aware of trim and stability in the future.

The researchers can reach our goals if the people in this institution and industry continue to show their support and appreciation towards the people who were working on the maritime industry. Although, it would take a very long time to establish a concrete program, the results are bound to please.

### Recommendations

Maritime Students. It is recommended to give a small amount of literature towards the improvement of the maritime industry.

Maritime Instructors. It is recommended to have more educational programs for growth when it comes to trim and stability which could create an antecedent in creating supplemental strategies for teaching the course to enhance the maritime students' awareness level.

### Recommendations for Practitioners

In a competitive and score market of efficient cadets, the researchers recommend leveling up these courses' facilitation.

Particular attention to this should be given to the faculty and administrators of the University of the Visayas that should consider increasing competency in teaching the course

### Recommendations for Improving this Study

It is recommended to define Trim and stability based on how it is facilitated by the teachers or instructors that include

adding more subtopics and factors in trim and stability, like technical problems, more equipment and execution of emergency situations as well as the different ship and stability techniques.

It is recommended to categorize group of respondents with varying but relevant understanding to trim and stability so that responses can be analyzed in several specific area that can be subjected for further study.

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