

NARRATIVE REPORT

DECEMBER
2024

Bachelor of
Science in
Marine
Engineering

RESEARCH



Zamboanga State College of Marine Sciences & Technology (ZSCMST)



PROGRAM PERFORMANCE PROFILE



1. Program

-
- BACHELOR OF SCIENCE IN MARINE ENGINEERING (BSMarE)

1. Institution

ZAMBOANGA STATE COLLEGE OF MARINE SCIENCES AND TECHNOLOGY

Location: FORT PILAR, ZAMBOANGACITY

Campus where the Program is Offered: CAMPUS A CME

DEAN:

CAPT. MARNETTE M. APIT, MATMT

PROGRAM ADVISERS:

C/E CHRISTALYN DR CHIONG, Ph.D

OIC-PRESIDENT:

RODERICK D. TRIO, MAEd

TABLE OF CONTENTS



1. Introduction/CME Vision and Mission
2. Well-defined Objectives
3. Adequate and Relevant Projects/Activities to Achieve Objectives
4. Systematic and Effective Procedures
5. Reasonable Budget
6. Provisions of Materials and Other Resources
7. Participation of Significant Number of Faculty/Staff/Students/
Communities in Major Projects/Activities
8. Awards of Distinction and Achievement and Grants of This
Program, "Best Practices/ Adopted"

Introduction



1.1 History of ZSCMST

ZSCMST, established in 1956, has grown from humble beginnings to become a renowned institution producing globally competitive human resources for fisheries and other marine-based industries.

With the purpose of expanding its scope, ZSCMST established the College of Maritime Education in 1976.

The College of Maritime Education was founded in 1976, with its pilot course being the Bachelor of Science in Marine Transportation. Within ten years, in 1986, the Bachelor of Science in Marine Engineering was formed.

Because of Zamboanga's bustling ports and ZSCMST's advantageous location, students at the college of maritime education can witness firsthand what is meant to be a seafarer giving them a glimpse of their future and dreams.

Today, ZSCMST's College of Maritime Education stands alone as the sole Maritime School in Zamboanga Peninsula that offers both Bachelor of Science in Maritime Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMARE).

2. WELL-DEFINED OBJECTIVES



ZSCMST STRATEGIC GOALS 2020-2024

1. Produce professional human capital for gainful employment.
- 2. Provide quality research in line with national thrusts and global trends.**
3. Make extension services accessible to all.
4. To become a more financially self-sufficient ZSCMST.
5. Streamline Processes to Improve Effectiveness
6. Develop efficient, proactive, transparent, and accountable college management system and governance.
7. Intensive network/system and digital-based physical plant, facilities, and equipment in support of instruction, research, extension & production 4.0.

CME Strategic Goals 2020-2024

1. Elevate maritime cadet competence for a world-class Filipino maritime workforce.
- 2. Foster maritime research and innovation**
3. Expand outreach and extension services to disseminate maritime knowledge to communities and industries influenced by maritime activities.
4. Optimize financial sustainability for Maritime Education
5. Enhance operational efficiency and educational processes to ensure effective delivery of maritime education aligned with IMO and STCW requirements.
6. Implement governance structures that facilitate communication and decision-making in adherence to IMO and STCW standards.
7. Modernize maritime infrastructure for Education 4.0

2030 Agenda for Sustainable Development



PEOPLE

EMPOWERING ALL HUMAN BEINGS TO FULFILL THEIR POTENTIAL IN DIGNITY AND EQUALITY



PLANET

SUSTAINABLE CONSUMPTION AND PRODUCTION, AND PROACTIVE MANAGEMENT FOR THE PRESENT AND FUTURE GENERATIONS



PROSPERITY

ECONOMIC, SOCIAL, AND TECHNOLOGICAL PROGRESS THAT IS IN HARMONY WITH NATURE



PEACE

INCLUSIVE SOCIETIES FREE FROM FEAR AND VIOLENCE



PARTNERSHIP

STRENGTHENING GLOBAL SOLIDARITY TO AID THE POOREST AND VULNERABLE



Advancing Fisheries, Resource Management & Maritime Technology through Sustainable Systems Education

National Development Plan 2023-2028



Develop and Protect Capabilities of Individuals and Families



Transform Production Sectors to Generate more Quality Jobs and Competitive Products



Create and Provide Enabling Environments

MATATAG, MAGINHAWA, AT PANATAG NA BUHAY



Zamboanga Peninsula: The Center of Sustainable Agri-Fishery Industries of the Philippines

Inclusive Growth and Globally-Competitive Agri-Fishery Industries

DOST Harmonized National Research and Development Agenda 2022-2028

AGRICULTURE, AQUATIC, AND NATURAL RESOURCES

Food security, Value-chain development for livelihood and income generation, Climate change Resilience, and Environmental Sustainability

NATIONAL INTEGRATED BASIC RESEARCH AGENDA

Water security, Food and Nutrition, Health Sufficiency, Clean Energy, Sustainable Community, and Inclusive Nation-building

HEALTH RESEARCH & DEVELOPMENT AGENDA

Drug discovery, functional food, nutrition and food safety, disaster risk reduction and climate change adaptation in health

National Higher Education Research Agenda-2 2009-2018

EDUCATION & EDUCATION MANAGEMENT

- Program and curricular studies towards development
- Policy research for higher education financing, governance, accreditation, and internationalization
- Institutional development studies, manpower demand and supply, and graduate tracers

SOCIAL STUDIES CMO 4I, SERIES OF 2010

- **COMMUNITY TRANSITIONS**
Evolution of social institutions in response to changes in community structures and labor migration
- **EDUCATION**
Human capital development, educational policies, and educational reforms
- **DISASTER**
Vulnerability, consequences, and mitigation strategies
- **SOCIAL CHANGE**
ICT and its impact on education, governance, agricultural practices, and virtual communities

Advancing
Fisheries,
Resource
Management &
Maritime Technology
through
Sustainable
Systems
Education



PRIORITY AREAS

RESEARCH, INNOVATION AND EXTENSION

Advancing Fisheries, Resource Management & Maritime Technology through Sustainable Systems Education

FISHERIES AND AQUACULTURE	ENVIRONMENT AND NATURAL RESOURCES	MARINE AND MARITIME TECHNOLOGY	FOOD, CULTURE, AND BUSINESS	SOCIOECONOMIC IMPACTS
Culture and Capture Technologies for Improved Food and Feed Production	Coastal Habitat Assessment, Monitoring, and Conservation	Gear and Vessel Innovations for Improved Operations	Process Development and Optimization for Globally Competitive Goods Production	Innovative Teaching Strategies for Tech Transfer and Community Capacitation
Alternative Feeds and Feed Additives for Improved Nutrition	Biodiversity, Vulnerability, and Mitigation & Adaptation Strategies towards Climate Change Resilience	Strategies and Approaches for Human Capital Competency Enhancement	Profiling and Safety Improvement of Traditional/ Local Food Products	Modes and Approaches for Effective Community-based Alternative Learning Systems
Disease Diagnostics and Sustainable Management Strategies	Rehabilitation and Climate-change proofing of vulnerable ecosystems	Skills-based Certification for Industrial Manpower Supply	Innovative Strategies for Cultural and Heritage-based Ecotourism	Outcomes-based Education as Approach for Climate Change Resilient Communities
Technology Validation and Roll-Out for Commercialization	Sustainable Development through Landscape and Seascape approach	Health Promotion and Work-related Hazard Mitigation Strategies	Business Models and Marketing Strategies for Technology Commercialization	Competency Enhancement through Innovative Teaching Approaches

SARDINES • SEaweEDS • CRUSTACEANS • FIN FISHES • CEPHALOPODS • AQUAFEDS • ECOTOURISM

Foster maritime research and innovation

1. Objectives

- 1.1. Equip instructors with advanced knowledge and skills in maritime research and innovation.
- 1.2. Facilitate the development of patentable innovations from institutional research efforts.
- 1.3. Enhance collaboration between the institution and maritime industry stakeholders for research and training.

Key Performance Indicators for each of the objectives

1.1 Equip instructors with advanced knowledge and skills in maritime research and innovation.

- Number of instructors trained annually in advanced maritime research and innovation techniques.
- Percentage of instructors who complete certifications in maritime research and innovation within 2020-2024
- Number of research projects conducted.
- Frequency of participation maritime research workshops or conferences.

1.2 Facilitate the development of patentable innovations from institutional research efforts.



- Number of research projects initiated annually with potential for patent application.
- Number of patents filed and approved within 2020-2024
- Percentage of research efforts resulting in commercialized or patentable products.
- Average time taken to transition a research idea to patent filing.
- Funding secured for research projects with patent potential.

1.3 Enhance collaboration between the institution and maritime industry stakeholders for research and training.

- Number of formal research and training partnerships established annually with maritime industry stakeholders.
- Frequency of joint research initiatives conducted with industry partners per year.
- Number of industry professionals contributing as guest lecturers or collaborators in institutional projects.
- Percentage of institutional research projects co-funded by maritime industry stakeholders.
- Satisfaction rating from stakeholders on collaboration outcomes.

3. ADEQUATE AND RELEVANT PROJECTS/ACTIVITIES TO ACHIEVE OBJECTIVES

In the context of the **Joint CHED-MARINA Memorandum Circular (JCMMC)**, particularly **JCMMC No. 1, Series of 2023**, which prescribes the policies, standards, and guidelines for maritime education programs in the Philippines, research in the curriculum is strategically applied to the maritime industry rather than being treated as a standalone subject. This ensures that research efforts are directly relevant to the industry's needs, focusing on practical solutions and innovations that can drive progress and meet global maritime standards.



Republic of the Philippines
OFFICE OF THE PRESIDENT
COMMISSION ON HIGHER EDUCATION

DEPARTMENT OF TRANSPORTATION
MARITIME INDUSTRY AUTHORITY



JOINT CHED – MARINA MEMORANDUM CIRCULAR NO. 01
Series of 2023

SUBJECT: POLICIES, STANDARDS AND GUIDELINES FOR THE BACHELOR OF SCIENCE IN MARINE TRANSPORTATION AND BACHELOR OF SCIENCE IN MARINE ENGINEERING PROGRAMS, SERIES OF 2022, AS AMENDED

Article XII
RESEARCH AND EXTENSION

Section 37. Integration of Research and Extension

In accordance with the trifold functions of higher education on instruction, research and extension, the faculty of MHEIs will undertake research and extension activities. Students as well will also be provided opportunities for them to do research as may be relevant to their projects and activities (e.g. formulation of a navigation plan; formulation of a plan for the management of a marine environment, among others).

Reference: Joint CHED-MARINA Memorandum Circular (JCMMC), particularly JCMMC No. 1, Series of 2023, page. 38.

<https://stcw.marina.gov.ph/wp-content/uploads/2016/02/JOINT-CHED-MARINA-MEMORANDUM-CIRCULAR-No.-01.pdf>



Republic of the Philippines
Zamboanga State College of Marine Sciences and Technology
Fort Pilar, Rio Hondo, Zamboanga City
Tel. No.: (062) 991-0644 Telefax (062) 991-0777 website: <http://www.zscmst.edu.ph>



Office of the Vice President for Research, Innovation, and Extension

January 12, 2023

Dr. JAIME G. JALON
College President
This College

Sir:

With the leadership transition in the OVPRIE, the undersigned would like to request your office to allow the conduct of the RIE and College-based Onboarding meetings on January 16-20, 2023 at the College Audio-Visual Room. Specific meeting schedules and agenda are as follows:

Schedule:

- a. VPRIE- Monday, 9AM-12NN
- b. CFMS- Tuesday, 9AM-12NN
- c. CELA- Wednesday, 9AM-12NN
- d. FIC- Wednesday, 2PM-5PM
- e. CMT- Thursday, 9AM-12NN
- f. CME- Friday, 9AM-12NN

for 1/16/23
1/16/23
1/17/23
1/18/23
1/19/23
1/20/23

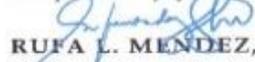
Agenda:

1. RIE Profile by Unit Heads and Deans
-Mandate, Manpower, Accomplishment and AACCUP Recommendations
-RIE Goals and Strategies for 2023
2. RIE Overview by VPRIE
-Mandate, Goals, and Guidelines
-Blue Economy Agenda
-Proposed Activities for 2023
3. Enlistment and Commitment

As these meetings are crucial for the setting and accomplishing of the 2023 goals, the RIE unit heads and staff (see attached organizational chart) are required to attend and bring a copy of their Terms of Reference (TOR) and unit accomplishment reports. The entire college membership is encouraged to attend to provide an avenue for the enlistment and expression of their intent (see attached intent form) to participate in any of the RIE undertakings. The Deans and Coordinators (R&E) are directed to bring their AACCUP evaluation and compliance reports along with their Research and Extension Plan for 2023. It will also be of value to identify early on their stakeholders, research, innovation, and extension goals for the year.

Thank you very much for facilitating this request and ensuring that all of us are onboard towards a proactive and productive RIE community.

Respectfully yours,

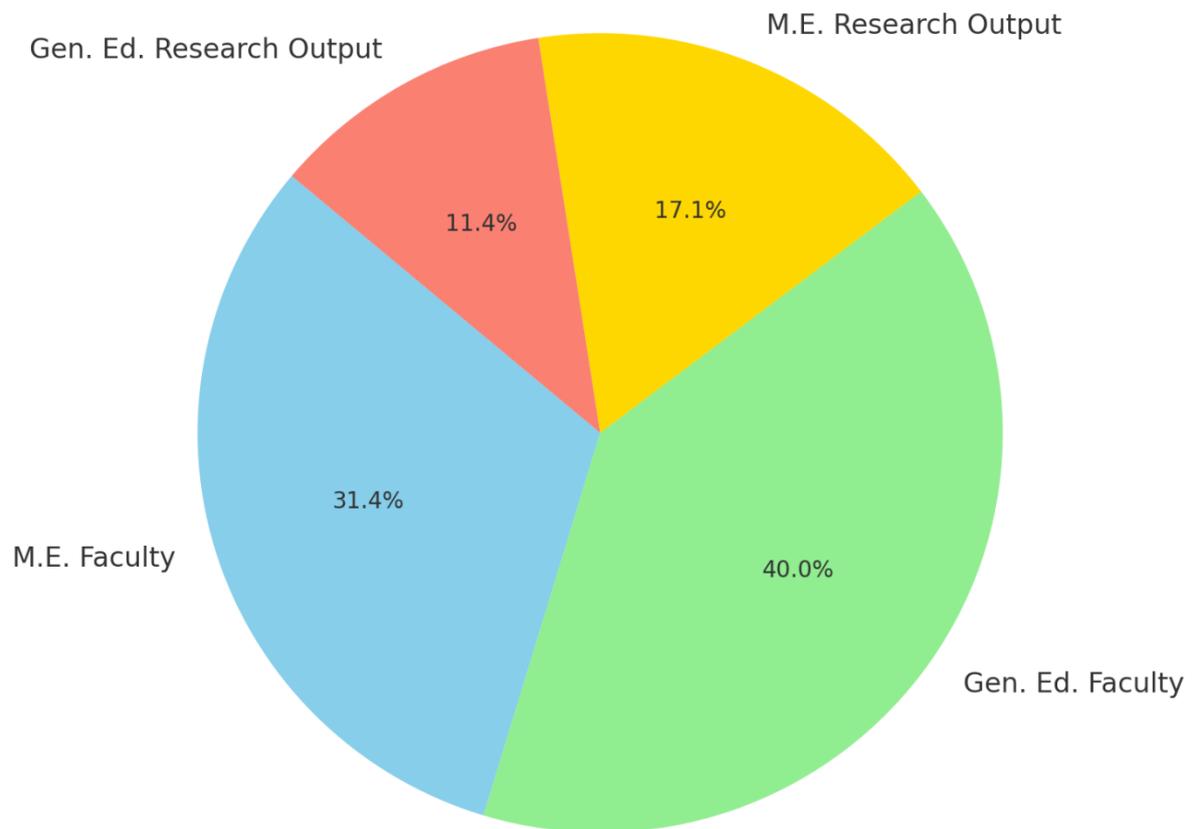

RUFA L. MENDEZ, PhD
VP for Research, Innovation, and Extension

APPROVED:


JAIME G. JALON, PhD
College President



Distribution of Faculty and Research Outputs



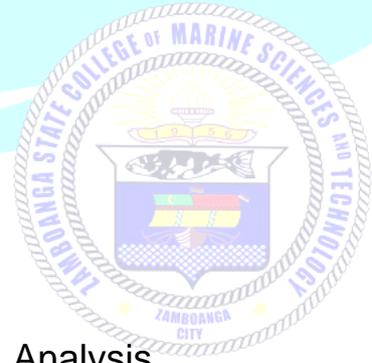
Number of Maritime Engineering faculty 11.

Number of General Education faculty 4.

Number of Marine Engineering faculty with research output 6.

Number of Gen. Ed. faculty with research output 4.

NUMBER OF RESEARCH PROJECT



Name: **C/E CHRISTALYN DR. CHIONG**

Journal Name: Journal of Nambian Studies

Manuscript Title: Beyond the Maritime Education Classrooms: Analysis of Life Skills Gained from Maritime Trainings

Date: 2023

Name: **ENGR. SINA A. SAHIDAINI**

Research Title: Manuscript Title: Electrical Power Quality Improvement through Modeling.

Publication Date: 2020/12

Name: **3/EJUANITO C. MENDOZA**

Research Title: Student's Proficiency in Operating Auxiliary Machineries: Basis for the Development of an Outcomes-based Module Publication

Date: 2023 (On going)

Name: **ENGR. QUIRINO T. AGANG JR.**

Research Title: Usefulness of Gamification, Technology Proficiency and Self- Efficacy Among Maritime Faculty: Bases for Development of Instructional Enhancement Program

Publication Date: 2023 (On going)

Name: **3/E PORFERIO D. BENGEL JR.**

Research Title: Cadets Awareness, Attitude, and Performance of Onboard Training in Maritime Institutions: Bases for Enhancement Program

Publication Date: 2023 (On going)

Name: **3/E IVAN JUDE P. MARTINEZ**

Research Title: Assessing and Mitigating Marine Pollution within Zamboanga City and Jolo, Sulu: A Comprehensive Study

Publication Date: 2024 (On going)



Name: **3/E MARY ROSE DELA CRUZ**

Research Title: The Filipina Seafarer: Surviving a man-centered world

Publication Date: 2024 (On going)

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Journal of Research in Applied Linguistics

Research Title: Investigating optional functional element and obligatory contour principle in L2 comprehension and production among ESL learners.

Publication Date: 2020/12

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Asian Journal of English Language Studies

Research Title: Same-verb different-particle phrasal verbs in Philippine English.

Publication Date: 2020/12

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Taiwan International ESP Journal

Research Title: A Needs Analysis Study of Engine-Deck Communication: Towards Improving Syllabus Design

Publication Date: 2020/12/1

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Philippine Journal of Linguistics

Research Title: The role of second person pronouns in expressing social behavior: An undocumented case in Zamboanga Chavacano

Publication Date: 2018

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Asian Journal of English Language Studies

Research Title: Same-verb different-particle phrasal verbs in Philippine English

Publication Date: 2020/12

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Lasallian Institute for Development and Educational Research (LIDER), De La Salle University

Research Title: Vocabulary Notebook for Teaching and Learning Technical Vocabulary

Publication Date: 2019



Name: **GEFILLOYD L. De CASTRO**

Journal Name: Asian Journal for Public Opinion Research

Research Title: Knowledge and attitudes not strongly related to COVID-19 Prevention, behaviors, and vaccination among Filipino college students

Publication Date: 2022/11

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Philippine Journal of Linguistics

Research Title: Investigating cross-linguistic influence in selected bipartite nouns in Philippine English

Publication Date: 2020/12

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Journal of Pidgin and Creole Languages

Research Title: On the orthography of Philippine Creole Spanish in Zamboanga

Publication Date: 2024/11/18

Name: **GEFILLOYD L. De CASTRO**

Journal Name: The GLOCAL Proceedings: The GLOCAL Conference in Asia 2022

Research Title: Does Zamboanga Chavacano have its Own Idiomatic Expressions? A Preliminary Analysis

Publication Date: 2023



Name: **GEFILLOYD L. De CASTRO**

Journal Name: West Visayas State University Research Journal

Research Title: Gendered argumentative discourse in the college students' essay

Publication Date: 2020

Name: **GEFILLOYD L. De CASTRO**

Research Title: Chavacano de Zamboanga: Un Poquito Español

Publication Date: 2019/10/20

Name: **GEFILLOYD L. De CASTRO**

Source: <https://www.researchgate.net>

Research Title: Chavacano de Zamboanga: Idiomatic Expressions and Chavacano-English Dictionary

Publication Date: 2019

Name: **GEFILLOYD L. De CASTRO**

Journal Name: West Visayas State University Research Journal

Research Title: Gendered argumentative discourse in the college students' essay

Publication Date: 2020

Name: **George S. Lauriaga Jr.**

Journal Name: NeuroQuantology

Research Title: Memorizing Operations and Solving Mathematical Problems as Cognitive Processes: Does Math Anxiety Happens?

Publication Date: September 2022

Name: **Elvira E. Salian**

Journal Name: International Journal of Early Childhood Special Education

Research Title: Understanding the Discourse Competence of the College Students: Towards the Development of the Social-Communicative Competence **in the Early Childhood Education**

Publication Date: 02 2021

Name: **Elvira E. Salian**

Journal Name: International Journal of Early Childhood Special Education

Research Title: Unveiling English Linguistic Competence of College Students: Foundation for Language Literacy Program for Early Childhood Education

Publication Date: 08 2022



Name: **Lorena G. Tan**

Journal Name: Journal of Namibian Studies

Research Title: Real-Life Valuation And Re-Configuring Instructional Approach Of Learning Mathematics Among College Non-Math-Oriented Students

Publication Date: 2023

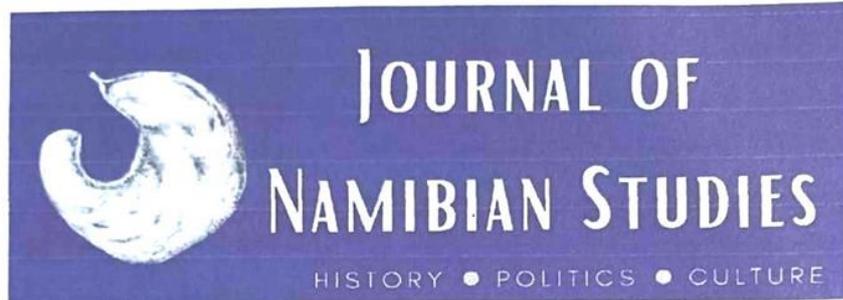
NUMBER OF RESEARCH PUBLISHED AND ON-GOING

Name: **C/E CHRISTALYN DR. CHIONG**

Journal Name: Journal of Namibian Studies

Manuscript Title: Beyond the Maritime Education Classrooms:

Analysis of Life Skills Gained from Maritime Trainings



Date: 19-04-2023

Journal Name: *Journal of Namibian Studies*

Manuscript ID: JNS-0182

Manuscript Title: **Beyond the Maritime Education Classrooms: Analysis of Life Skills Gained from Maritime Trainings**

AUTHOR/S: **Christalyn DR. Chiong**

Your article has been accepted for publication in regular issue in the Journal of Namibian Studies

ACCEPT	REVISIONS REQUIRED	REJECTED
--------	---------------------------	----------

With Warm Regards,

Dr. Jimmy Associate Editor



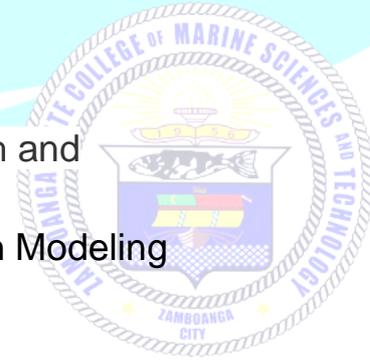
Journal of Namibian Studies
(ISSN: 2197-5523)

<https://namibian-studies.com/index.php/JNS/article/view/3171>

Name: **ENGR. SINA A. SAHIDAINI**

Journal Name: International Journal of Engineering Research and Engineering, Computer Science, Engineering Technology

Research Title: Electrical Power Quality Improvement through Modeling and Optimization of passive Harmonic Filter



Published by :
<http://www.ijert.org>

International Journal of Engineering Research & Technology (IJERT)

ISSN: 2278-0181
Vol. 7 Issue 10, October-2018

Electrical Power Quality Improvement through Modeling and Optimization of Passive Harmonic Filter

Sina A. Sahidaini

Department of Electrical Engineering, College of Engineering
Mindanao State University-IT
Iligan City, Philippines

College of Maritime Education
Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract— This paper studies on the harmonic distortion and the methods to mitigate the harmonics for a system with Load variation and different harmonic distortion level. A group of passive shunt filter are designed to reduce harmonic distortion and correct power factor. The proposed method optimize the group filter configuration which is suitable for load and distortion level variation to get best scenario out of passive harmonic filters. Maximum level for power factor as long as it is positive, consider as constraint and minimizing harmonics distortion index such as Total Harmonic Distortion (THD) and its Individual Harmonic Distortion (IHD) content are factors for objective function. Genetic Algorithm has been used as Optimization technique and software to simulate are MATLAB for genetic algorithm and ETAP for filter simulation in power system.

Keywords--Load Variation, Harmonic Distortion, Power Quality.

I. INTRODUCTION

Recently, there is an increasing concern about the environment. The need to generate pollution-free energy has triggered considerable effort toward renewable energy (RE). RE sources such as solar, wind, flowing water and biomass offer the promise of clean and abundant energy. They do not generate any greenhouse gases and are inexhaustible. Solar Power, in particular, is especially attractive for Philippines. In the era of renewable energy, wind power and solar Energy are mostly developed and matured technology around the globe. It is converted into a more convenient alternating current (AC) power through an inverter system. [1]

Advance in technology of semiconductor devices has led to a

mitigation techniques using active and passive filters [3]. Jain and Sing estimated harmonics in modern power systems narrowing down key issues and challenges [4].

A paper presented by Adel M. Sharaff, Michael E. Fisher a novel optimization design technique for power system shunt filters to ensure harmonic reduction and noise mitigation on the electrical utility grid. The proposed filter design is based on the minimization of a composite objective function depicting the three main filter objectives of minimum harmonic current penetration into the electric grid system, maximum current absorption by the harmonic filter and minimum harmonic voltage distortion at points of common coupling.

Theory for the Design of C-type Filter by Yao XIAO, Jie ZHAO, Shijie MAO Based on the theoretical analysis, the paper introduces an algorithm for calculating the parameters of C-type filter that has not been published before. Firstly, the relationships of all parameters are established and discussed. Then, Parameters with least cost of the filter are also derived. Finally, the method is testified by the parameters of C-type filters having been used in some HVDC projects. Young-Sik Cho and Hanju Cha present how to select tuning factor and quality factor in designing of a single-tuned passive harmonic filter. Tuning factor and quality factor must be considered before a decision of filter parameters(R, L and C). Rampant rise in population, energy demand, economic growth and emissions have popularized renewable energy sources [6-7]. Flow of currents in longer HVDC and HVAC lines and overloaded distribution transformers cause line losses [8].

II. FILTER DESIGN

Name: **ENGR. JUANITO C. MENDOZA**

Title: Student's Proficiency in Operating Auxiliary Machineries: Basis for the Development of an Outcomes-based Module



JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City
Fax / Tel. No. (63) (33) 323-54-63
Email: graduateschool@jblfmu.edu.ph / gsdistance_ed@jblfmu.edu.ph/
www.jblfmu.edu.ph



THE MARITIME VANGUARD

REGISTERED, ACCREDITED
AND/OR CERTIFIED TO:



Microsoft



CERTIFICATION

February 1, 2024

TO WHOM IT MAY CONCERN:

This certifies that **MR. JUANITO C. MENDOZA** has completed all the academic requirements for the degree Doctor of Philosophy in Maritime Education (Ph.D.M.E.) with specialization in Maritime Management.

Further, Mr. Mendoza has completed the final defense of his Dissertation paper "Students' Proficiency in Operating Auxiliary Machineries: Basis for Development of an Outcomes-based Module" last December 13, 2023.

This certification is issued upon request for whatever good or legal purpose it may serve.


GENEVA M. ELER, Ed. D.
Dean

We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, and Environmental Protection, Pollution Prevention, and Social Responsibility, in our continuous drive to satisfy and strive to exceed stakeholders' needs and expectations.

Complete Name: **Engr. QUIRINO T. AGANG**
Title: Usefulness of Gamification, Technology Proficiency and Self-Efficacy Among Maritime Faculty: Bases for Development of Instructional Enhancement Program



 **JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.**
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City 6000 Philippines
Fax/Tel No.: (63) (33) 336-10-80 / 323-54-63
Email add: alfred.espinosa@jblfmu.edu.ph/arevalo@jblfmu.edu.ph
Email add: graduateschool@jblfmu.edu.ph
gsdistance_ed@jblfmu.edu.ph
www.jblfmu.edu.ph 

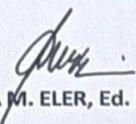
May 23, 2023

TO WHOM IT MAY CONCERN:

This certifies that **MR. QUIRINO T. AGANG JR.** passed the pre-oral dissertation defense last May 17, 2023.

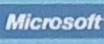
His approved dissertation title is "Usefulness of Gamification, Technology Proficiency and Self-Efficacy Among Maritime Faculty: Bases for Development of Instructional Enhancement Program."

This certification is issued upon request for whatever good or legal purpose it may serve.


GENEVA M. ELER, Ed. D.
Dean





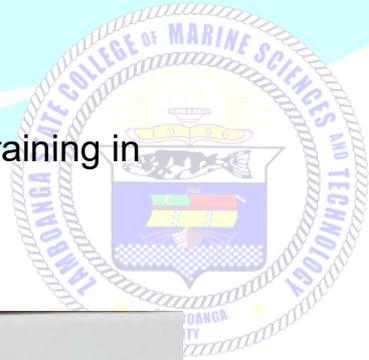


"We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, Environmental Protection, Pollution Prevention, and Social Responsibility, in our consistent drive to satisfy and strive to exceed stakeholders' needs and expectations."

Name: 3/E Porferio D. Bengel Jr.

“Cadets Awareness, Attitude, and Performance of Onboard Training in Maritime Institutions: Bases for Enhancement Program”

Date: May 23, 2023



JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City 5000 Philippines
Fax/Tel No.: (63) (33) 336-10-80 / 323-54-63
Email add: alfred.espinosa@jblfmu.edu.ph/arevalo@jblfmu.edu.ph
Email add: graduateschool@jblfmu.edu.ph
gsdistance_ed@jblfmu.edu.ph
www.jblfmu.edu.ph

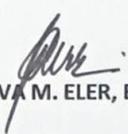
May 23, 2023

TO WHOM IT MAY CONCERN:

This certifies that **MR. PORFERIO D. BENDEL JR.** passed the pre-oral dissertation defense last May 17, 2023.

His approved dissertation title is “Cadets Awareness, Attitude, and Performance of Onboard Training in Maritime Institutions: Bases for Enhancement Program.”

This certification is issued upon request for whatever good or legal purpose it may serve.


GENEVA M. ELER, Ed. D.
Dean

We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, Environmental Protection, Pollution Prevention, and Social Responsibility, in our consistent drive to satisfy and strive to exceed stakeholders' needs and expectations.

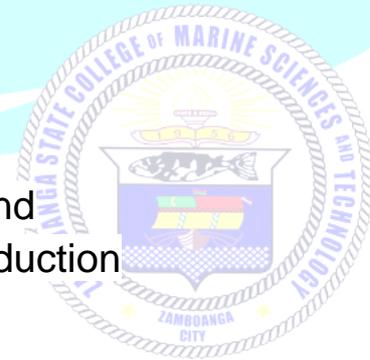
A vertical banner on the left side of the certificate contains several logos: "THE MARITIME VANGUARD", a circular logo with a sun and waves, "MARINA" with a shield emblem, "DepED" (Department of Education), "IAMU", and "Microsoft".

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Journal of Research in Applied Linguistics

Research Title: Investigating optional functional element and obligatory contour principle in L2 comprehension and production among ESL learners.

Publication Date: 2020/12



Journal of Research in Applied Linguistics

ISSN: 2345-3303 – E-ISSN: 2588-3887 – <http://rals.scu.ac.ir>

Published by Shahid Chamran University of Ahvaz

Please cite this paper as follows:

De Castro, G. L. (2021). Investigating optional functional element and obligatory contour principle in L2 comprehension and production among ESL learners. *Journal of Research in Applied Linguistics*, 12(1), 3-14. <https://doi.org/10.22055/RALS.2021.16721>



Shahid Chamran University
of Ahvaz



Research Paper

Investigating Optional Functional Element and Obligatory Contour Principle in L2 Comprehension and Production Among ESL Learners

Gefilloyd Lim De Castro

English Department, Zamboanga State College of Marine Sciences and Technology, Zamboanga City, Philippines; decastro@zscmst.edu.ph

Received: 12/02/2020

Accepted: 06/12/2020

Abstract

Most studies in optional functional element (OFE), specifically the optional function word (OFW) such as the optional *that* and obligatory contour principle (OCP), are concerned with accounting facilitation in language production in L1. The present study accounted for comprehension facilitation of OFE and OCP in syntactically ambiguous clausal complement, and OCP in L2 production among 180 ESL speakers. Utilizing quasi-experimental through the nonequivalent groups research design, the study found out differences in the interpretation of sentences with and without *that*. Adjacent identical elements (double *thats*) seemed to be avoided because they are perceived to be ungrammatical. Findings suggest that complementary clause (CC), with an embedded specific noun, is easily understood if optional *that* is included, whereas CC with an embedded common noun is easily understood without the said optional word. Findings are also pivotal in understanding comprehension-facilitation and production-facilitation accounts in L2 with respect to OFE and OCP.

Keywords: Comprehension; Language Production; Identical Elements; Optional Functional Element; Obligatory Contour Principle; Psycholinguistics

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Asian Journal of English Language Studies

Research Title: Same-verb different-particle phrasal verbs in Philippine English.

Publication Date: 2020/12



Same-verb different-particle phrasal verbs in Philippine English

Gefilloyd L. De Castro

Zamboanga State College of Marine Sciences and Technology, the Philippines

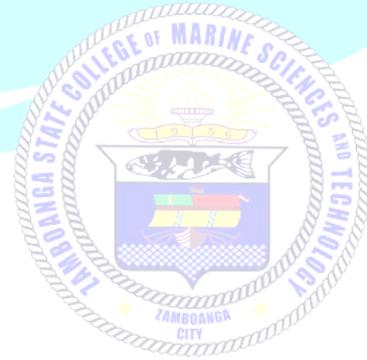
Ateneo de Zamboanga University, the Philippines

decastro@zscmst.edu.ph, aqohsidyep812@gmail.com

Abstract

English preposition is one of the hardest features to learn and master, especially by 'nonnative' speakers of the English language; hence, several Filipinos tend to interchange particle/preposition in phrasal verbs (PhVs) (e.g., *fill up* and *fill out*). As such, this study aimed to compare the semantic features and idiomatic status of selected same-verb different-particle PhVs, and describe their syntactic features utilizing the Philippine component of the International Corpus of English (ICE-PHI) and the Global Web-based English Corpus (GloWbE) Philippines. This study revealed evidence that clearly shows the interchange of particle/preposition for the same verb. A new meaning has been found for two PhVs. Most of the PhVs follow the type 2 (transitive) pattern, while others follow the type 1 (intransitive) pattern. They generally occur in the medial position, rarely in the beginning position, and very rarely in the final position. The study suggests that despite the interchange, Filipinos generally follow the American English (AmE) usage of PhVs. Also, despite the fact that PhV is not an inherent characteristic in the first language, Filipinos still show adequate knowledge and proficiency in the use of PhVs in their utterances. The interchange of particle/preposition may be considered as an emerging feature of Philippine English (PhE).

Keywords: Language variation, Philippine English, phrasal verbs, semantics



Name: **GEFILLOYD L. De CASTRO**

Journal Name: Taiwan International ESP Journal

Research Title: A Needs Analysis Study of Engine-Deck
Communication: Towards Improving Syllabus Design

Publication Date: 2020/12/1

ResearchGate

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/348290066>

A Needs Analysis Study of Engine-Deck Communication: Towards Improving Syllabus Design

Article · December 2020

DOI: 10.6196/TIESP.2020.11.02.0002

CITATIONS

4

READS

662

1 author:



Gefilloyd De Castro

Zamboanga State College of Marine Sciences and Technology

12 PUBLICATIONS 27 CITATIONS

SEE PROFILE



Name: **GEFILLOYD L. De CASTRO**

Research Title: Tracer Study of Hotel and Restaurant Management Graduates of One State College in the Philippines from 2014-2016

Publication Date: January 2017

ResearchGate

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/321331451>

Tracer Study of Hotel and Restaurant Management Graduates of One State College in the Philippines from 2014-2016

Article · January 2017

CITATIONS

15

READS

42,428

1 author:



Gefilloyd De Castro

Zamboanga State College of Marine Sciences and Technology

12 PUBLICATIONS 27 CITATIONS

[SEE PROFILE](#)

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Philippine Journal of Linguistics

Research Title: The role of second person pronouns in expressing social behavior: An undocumented case in Zamboanga Chavacano

Publication Date: 2018

ResearchGate

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/330467058>

The role of second person pronouns in expressing social behavior: An undocumented case in Zamboanga Chavacano

Article · December 2018

CITATIONS

3

READS

1,597

1 author:



Gefilloyd De Castro

Zamboanga State College of Marine Sciences and Technology

12 PUBLICATIONS 27 CITATIONS

[SEE PROFILE](#)

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Lasallian Institute for Development and Educational Research (LIDER), De La Salle University

Research Title: Vocabulary Notebook for Teaching and Learning Technical Vocabulary

Publication Date: 2019



CONFERENCE PROCEEDINGS

ARAL 2019

Vocabulary Notebook for Teaching and Learning Technical Vocabulary

Gefilloyd L. De Castro

Zamboanga State College of Marine Sciences and Technology

aqohsidyep812@gmail.com

Abstract. While teaching specialized/technical (henceforth technical) vocabulary is pivotal for learners to be effective in the target situation, it is one of the most challenging tasks English for Specific Purposes (ESP) practitioners must surpass. The present study sought to determine (1) the effectiveness of vocabulary notebook in the development of students' technical vocabulary in the target context, and (2) the students' perceptions of the vocabulary notebook as a potential teaching and learning tool. A mixed method was employed. A total of 188 third year college students participated in this study. This study identified positive outcomes both from the scores and experience of the students, which imply that the vocabulary notebook was generally effective, particularly for technical vocabulary acquisition and retention. This study posits that the use vocabulary notebook for technical vocabulary acquisition makes the teaching and learning of the language meaningful and relevant to the target context. The study suggests methodological process for implementing vocabulary notebook in language teaching.

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Asian Journal for Public Opinion Research

Research Title: Knowledge and attitudes not strongly related to COVID-19 Prevention, behaviors, and vaccination among Filipino college students

Publication Date: 2022/11



Asian Journal for Public Opinion Research - ISSN 2288-6168 (Online) | 316
Vol. 10 No.4 November 2022: 316-339
<http://dx.doi.org/10.15206/ajpor.2022.10.4.316>

**Knowledge and Attitudes Not Strongly Related to COVID-19
Prevention, Behaviors, and Vaccination Among Filipino College
Students**

Gefilloyd L. De Castro¹

Abee M. Eijansantos

Nuriza P. Jalani

Joni Czarina P. Amora

Gualberto A. Lantaya Jr.

Zamboanga State College of Marine Sciences and Technology, Philippines

Abstract

The effects of the COVID-19 pandemic across various sectors are far-reaching, and the education sector is not an exemption. Approved and recognized vaccines are clinically proven to provide protection and have been considered one of the primary mitigations against the virus. Knowledge, attitude, and related practices (henceforth KAP) toward the virus is widely considered to be an essential cognitive key in public health for health intervention, prevention, and promotion. Previous studies revealed a positive correlation between knowledge and attitude. This study investigated the KAP and their relationship among the 857 college students in one state college in the Philippines using an online survey. Using descriptive statistics, the findings showed that the majority of the respondents have been fully vaccinated against COVID-19. Respondents were shown to be knowledgeable about COVID-19, specifically about its transmission, clinical symptoms, treatment, risk groups, isolation, prevention, and control. Positive attitudes toward individual and governmental mitigation and control of the virus were shown. Their scores

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Philippine Journal of Linguistics

Research Title: Investigating cross-linguistic influence in selected bipartite nouns in Philippine English

Publication Date: 2020/12



ResearchGate

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/348755618>

Investigating Cross-Linguistic Influence in Selected Bipartite Nouns Investigating Cross-linguistic Influence In Selected Bipartite Nouns in Philippine English

Article · December 2020

CITATION
1

READS
577

1 author:



Gefilloyd De Castro
Zamboanga State College of Marine Sciences and Technology

12 PUBLICATIONS 27 CITATIONS

[SEE PROFILE](#)

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Journal of Pidgin and Creole Languages

Research Title: On the orthography of Philippine Creole Spanish in Zamboanga

Publication Date: 2024/11/18



Gefilloyd L. De Castro

On the orthography of Philippine Creole Spanish in Zamboanga

Authors Gefilloyd L. De Castro

Publication date 2024/11/18

Journal Journal of Pidgin and Creole Languages

Pages 1-10

Publisher John Benjamins Publishing Company

Description This article aims to demonstrate the critical importance of corpus-driven language standardization and linguistic expertise in orthography development using Zamboanga Chavacano (henceforth ZC) as a case study. I aim to highlight the inconsistencies between the official orthography and actual usage and make a case for corpus-driven language planning in the development of creole orthographies by analyzing the current official orthography of ZC. Specifically, I will present what the orthographic system of ZC should look like if corpus planning had played a role in the development of the official and standard orthography of ZC. This note discusses this issue based on an analysis of the Contemporary Written Zamboanga Chabacano Corpus (CWZCC) compiled by Himoro (2019) and compares the practices that emerge from the corpus with those used in the officially approved orthography ...

Scholar articles [On the orthography of Philippine Creole Spanish in Zamboanga](#)
GL De Castro - Journal of Pidgin and Creole Languages, 2024
[Related articles](#)



Name: **GEFILLOYD L. De CASTRO**

Journal Name: The GLOCAL Proceedings: The GLOCAL Conference in Asia 2022

Research Title: Does Zamboanga Chavacano have its Own Idiomatic Expressions? A Preliminary Analysis

Publication Date: 2023



Gefilloyd L. De Castro

Does Zamboanga Chavacano have its Own Idiomatic Expressions? A Preliminary Analysis

Authors Gefilloyd L. De Castro

Publication date 2023

Conference The GLOCAL Proceedings: The GLOCAL Conference in Asia 2022

Pages 77-86

Publisher <https://doi.org/10.47298/cala2022.3-2>

Name: **GEFILLOYD L. De CASTRO**

Journal Name: West Visayas State University Research Journal

Research Title: Gendered argumentative discourse in the college students' essay

Publication Date: 2020



Gefilloyd L. De Castro

[Gendered argumentative discourse in the college students' essay](#)

Authors Gefilloyd L. De Castro, Nuriza P. Jalani

Publication date 2020

Journal West Visayas State University Research Journal

Volume 9

Issue 1

Pages 10-30

Publisher West Visayas State University

Description This paper is a contrastive rhetoric study that focuses on gender differences with respect to argumentation. It sought to investigate the prominent argument patterns and the differences in the argument structures and rhetorical appeals between male and female in their essay writing. It adopted Toulmin's model of reasoning and argumentation that includes the use of claim, evidence, qualifiers and rebuttal, and Aristotle's rhetorical appeals. Using sequential exploratory qualitative-quantitative mixed methods, the study revealed no differences in the argument structures and rhetorical appeals between the two groups except only on the use of ambiguity, assertion that cannot be argued and pathos, in that the female participants show a stronger tendency to use them compared with male participants. Most of the devices and strategies were employed by the participants. The findings of this study do not provide a very strong support for gender difference as a sub-culture with respect to argumentation structure considering that the participants come from the same cultural background or orientation as far as the national culture is concerned.

Scholar articles [Gendered Argumentative Discourse in the College Students' Essay](#)
G De Castro, N Jalani - WVSU Research Journal, 2020
[Related articles](#) All 3 versions

Name: **GEFILLOYD L. De CASTRO**

Research Title: **Chavacano de Zamboanga: Un Poquito Español**

Publication Date: 2019/10/20



Name: **GEFILLOYD L. De CASTRO**

Source: <https://www.researchgate.net/publication>

Research Title: Chavacano de Zamboanga: Idiomatic Expressions and Chavacano-English Dictionary

Publication Date: 2019



Gefilloyd L. De Castro

Chavacano de Zamboanga: Un Poquito Español

Authors Gefilloyd L De Castro

Publication date 2019/10/20

Publisher Gefilloyd L. De Castro

Description The Chavacano de Zamboanga Handbook is a study of the basic rules of grammar and structure of Zamboanga Chavacano (ZC) language. It is primarily designed for those who are interested in studying the language or in knowing more about it. While some Philippine languages and Spanish contribute to the development of ZC, this book shows how the ZC is very unlike them in terms of its morphological and syntactical features. It also includes some changes and additional features in the language which were not included in other ZC books.

Scholar articles [Chavacano de Zamboanga: Un Poquito Español](#)

GL De Castro - 2019

[Related articles](#)

Name: **George S. Lauriaga Jr.**

Journal Name: NeuroQuantology

Research Title: Memorizing Operations and Solving Mathematical Problems as Cognitive Processes: Does Math Anxiety Happens?

Publication Date: September 2022



NeuroQuantology | September 2022 | Volume 20 | Issue 11 | Page 8987-8997 | doi: 10.48047/NQ.2022.20.11.NQ66899
George S. Lauriaga Jr. et al/Memorizing Operations and Solving Mathematical Problems as Cognitive Processes: Does Math Anxiety Happens?



Memorizing Operations and Solving Mathematical Problems as Cognitive Processes: Does Math Anxiety Happens?

George S. Lauriaga Jr.
Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract

This study sought to Determine the existence of math anxiety and determine the level of the academic performance of first year college students in college algebra. In order to meet the objectives, the researcher employed the descriptive-correlational method. This study was conducted in the College of Business Management (CBM) in one of the private universities in Zamboanga City where respondents were chosen applying random sampling. The study found out that the teachers' classroom behavior had a positive significant relationship with students' academic performance. Respondents with low level of math anxiety had high performance or students with high anxiety had low performance. It was also noted that the first year college students were not very much scared about college algebra. Hence, this study recommends that teachers must have patience and compassion to students as not to develop anxiety that would probably lower their performance in math or even failure. Since mathematics is a difficult subject, teachers must teach the subject slowly, present it according to the capacity of the learners and a logical solution of every problem to awaken their interest towards the subject instead of developing math anxiety. School administrators must send their teachers to seminars that pertains teaching strategies to enhance teachers' potentials in teaching mathematics.

Keywords: *memorizing operations, solving, mathematical problems, cognitive processes, math anxiety*

DOI Number: 10.48047/NQ.2022.20.11.NQ66899

NeuroQuantology 2022; 20(11):8987-8997

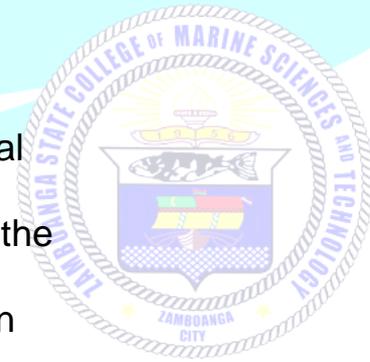
8987

Name: Elvira E. Salian

Journal Name: International Journal of Early Childhood Special Education

Research Title: Understanding the Discourse Competence of the College Students: Towards the Development of the Social-Communicative Competence in the Early Childhood Education

Publication Date: 02 2021



International Journal of Early Childhood Special Education (INT-JECSE)
DOI: 10.48047/INT-JECSE/V13I2.211262 ISSN: 1308-5581 Vol 13, Issue 02 2021

**Understanding the Discourse Competence of the College Students:
Towards the Development of the Social-Communicative Competence in the
Early Childhood Education**

Elvira E. Salian

Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract

The ways that children implement social and communication skills in peer-group interaction provide the foundation for successful later life adjustment. In this study, the focus was to find out the discourse competence of college students as basis for the development of the social-communicative competence in the early childhood education. This made use of the Descriptive research design which utilized a picture-cue writing ability test. The data indicate that the respondents' discourse competence (writing) test is described as average. Further analysis of the results suggests that the respondents have major problems in sentence construction rules; error on grammar or word order is fairly frequent. This implies that the respondents have difficulty deducing the connection between ideas. They seem to experience frequent use of wrong or inappropriate words. Expression of ideas is limited because of inadequate vocabulary. They lack the repertoire of words and they have limited knowledge of the English structure.

Keywords: discourse competence, social-communicative competence, childhood education, content, organization, language used, vocabulary, mechanics

Name: Elvira E. Salian

Journal Name: International Journal of Early Childhood Special Education

Research Title: Unveiling English Linguistic Competence of College Students: Foundation for Language Literacy Program for Early Childhood Education

Publication Date: 08 2022



International Journal of Early Childhood Special Education (INT-JECSE)
DOI:10.48047/INTJECSE/V14I8.193 ISSN: 1308-5581 Vol 14, Issue 08 2022

Unveiling English Linguistic Competence of College Students: Foundation for Language Literacy Program for Early Childhood Education

Elvira E. Salian

Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract

Language and literacy abilities can develop in any language, with the child's home language being the primary language of development. A Descriptive research design was employed to investigate the level of linguistic competence in grammar and vocabulary of college students at a State University in Zamboanga Peninsula, Philippines. The selection of participants was done using a purposive sampling procedure, with only students identified by their courses being included in the study. To answer the research questions, a Linguistic Competence Test, which was a standardized vocabulary and grammar test adapted from Lopina's (2010) study, was used. The study found that the overall linguistic competence of the respondents was that of a limited user of the language. Specifically, the respondents showed an extremely limited linguistic competence in grammar, while their competence in vocabulary was moderate. Therefore, it can be concluded that students learning English as a second language perform differently in their academic performance not only in grammar and vocabulary but also in written communication. Based on these findings, it is recommended that teaching strategies and approaches be reassessed, especially in the methods of teaching grammar and vocabulary. Additionally, enrichment activities should be provided to college students to improve their writing skills. Lastly, early childhood teachers should provide various writing activities to help develop these language components at an early stage of education.

Keywords: English, Linguistic Competence, Language Literacy Program, Early Childhood Education, Grammar, Vocabulary



Name: Lorena G. Tan

Journal Name: Journal of Namibian Studies

Research Title: Real-Life Valuation and Re-Configuring Instructional Approach Of Learning Mathematics Among College Non-Math-Oriented Students

Publication Date: 2023

Journal of Namibian Studies, 33 51 (2023): 1745-1765 ISSN: 2197-5523 (online)

Real-Life Valuation And Re-Configuring
Instructional Approach Of Learning Mathematics
Among College Non-Math-Oriented Students

Lorena G. Tan

lorena_tan@zscmst.edu.ph

Zamboanga State College of Marine Sciences and Technology.

Abstract

Incorporating a diverse range of instructional strategies is essential to address the multifaceted nature of students' attitudes and motivations towards mathematics. Students' positive outlook and recognition of mathematics' practical utility in real-world scenarios are reflected in their ability to see the relevance of the subject to their future careers, which in turn reflects positively on their perception of mathematics. The purpose of this study was to explore the perceptions of students on the value of mathematics in their life and identify the components of mathematics learning that represents this perceived value. The non-mathematic-oriented college students (n=20) were purposively sampled. The one-on-one interview was conducted to extract the personal experiences of students and describe how they value mathematics. The findings indicated that the perceived value of mathematics involves its general use, personal use, and applications to human-essential processes or resources. Perceived value governs the practical relevance of mathematics in everyday life and signifies an opportunity to leverage this awareness for improved learning experiences. Educators should thus focus on nurturing this subjective valuing, tailoring instruction to align with students' individual preferences and highlighting how mathematical concepts align with their personal and career aspirations. This study underscored the need for a multidimensional approach to

NUMBER OF RESEARCH PRESENTED REGIONAL, NATIONAL AND INTERNATIONAL CONFERENCE



Name: **ENGR. SINA A. SAHIDAINI**

Journal Name: International Journal of Engineering Research and Engineering, Computer Science, Engineering Technology

Research Title: Electrical Power Quality Improvement through Modeling and Optimization of passive Harmonic Filter

Published by :
<http://www.ijert.org>

International Journal of Engineering Research & Technology (IJERT)

ISSN: 2278-0181
Vol. 7 Issue 10, October-2018

Electrical Power Quality Improvement through Modeling and Optimization of Passive Harmonic Filter

Sina A. Sahidaini

Department of Electrical Engineering, College of Engineering
Mindanao State University-IIT
Iligan City, Philippines

College of Maritime Education
Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract— This paper studies on the harmonic distortion and the methods to mitigate the harmonics for a system with Load variation and different harmonic distortion level. A group of passive shunt filter are designed to reduce harmonic distortion and correct power factor. The proposed method optimize the group filter configuration which is suitable for load and distortion level variation to get best scenario out of passive harmonic filters. Maximum level for power factor as long as it is positive, consider as constraint and minimizing harmonics distortion index such as Total Harmonic Distortion (THD) and its Individual Harmonic Distortion (IHD) content are factors for objective function. Genetic Algorithm has been used as Optimization technique and software to simulate are MATLAB for genetic algorithm and ETAP for filter simulation in power system.

Keywords--Load Variation, Harmonic Distortion, Power Quality.

I. INTRODUCTION

Recently, there is an increasing concern about the environment. The need to generate pollution-free energy has triggered considerable effort toward renewable energy (RE). RE sources such as solar, wind, flowing water and biomass offer the promise of clean and abundant energy. They do not generate any greenhouse gases and are inexhaustible. Solar Power, in particular, is especially attractive for Philippines. In the era of renewable energy, wind power and solar Energy are mostly developed and matured technology around the globe. It is converted into a more convenient alternating current (AC) power through an inverter system. [1]

Advance in technology of semiconductor devices has led to a

mitigation techniques using active and passive filters [3]. Jain and Sing estimated harmonics in modern power systems narrowing down key issues and challenges [4].

A paper presented by Adel M. Sharaff, Michael E. Fisher a novel optimization design technique for power system shunt filters to ensure harmonic reduction and noise mitigation on the electrical utility grid. The proposed filter design is based on the minimization of a composite objective function depicting the three main filter objectives of minimum harmonic current penetration into the electric grid system, maximum current absorption by the harmonic filter and minimum harmonic voltage distortion at points of common coupling.

Theory for the Design of C-type Filter by Yao XIAO, Jie ZHAO, Shijie MAO Based on the theoretical analysis, the paper introduces an algorithm for calculating the parameters of C-type filter that has not been published before. Firstly, the relationships of all parameters are established and discussed. Then, Parameters with least cost of the filter are also derived. Finally, the method is testified by the parameters of C-type filters having been used in some HVDC projects. Young-Sik Cho and Hanju Cha present how to select tuning factor and quality factor in designing of a single-tuned passive harmonic filter. Tuning factor and quality factor must be considered before a decision of filter parameters(R, L and C). Rampant rise in population, energy demand, economic growth and emissions have popularized renewable energy sources [6-7]. Flow of currents in longer HVDC and HVAC lines and overloaded distribution transformers cause line losses [8].

II. FILTER DESIGN

Name: **ENGR. JUANITO C. MENDOZA**

Title: Student's Proficiency in Operating Auxiliary Machineries: Basis for the Development of an Outcomes-based Module

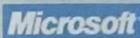


JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City
Fax / Tel. No. (63) (33) 323-54-63
Email: graduateschool@jblfmu.edu.ph / gsdistance_ed@jblfmu.edu.ph /
www.jblfmu.edu.ph



THE MARITIME VANGUARD

REGISTERED, ACCREDITED
AND/OR CERTIFIED TO:



CERTIFICATION

February 1, 2024

TO WHOM IT MAY CONCERN:

This certifies that **MR. JUANITO C. MENDOZA** has completed all the academic requirements for the degree Doctor of Philosophy in Maritime Education (Ph.D.M.E.) with specialization in Maritime Management.

Further, Mr. Mendoza has completed the final defense of his Dissertation paper "Students' Proficiency in Operating Auxiliary Machineries: Basis for Development of an Outcomes-based Module" last December 13, 2023.

This certification is issued upon request for whatever good or legal purpose it may serve.


GENEVA M. ELER, Ed. D.
Dean

We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, and Environmental Protection, Pollution Prevention, and Social Responsibility, in our continuous drive to satisfy and strive to exceed stakeholders' needs and expectations.

Complete Name: **Engr. QUIRINO T. AGANG**
Title: Usefulness of Gamification, Technology Proficiency and Self-Efficacy Among Maritime Faculty: Bases for Development of Instructional Enhancement Program



JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City 6000 Philippines
Fax/Tel No.: (63) (33) 336-10-80 / 323-54-63
Email add: alfred.espinosa@jblfmu.edu.ph/arevalo@jblfmu.edu.ph
Email add: graduateschool@jblfmu.edu.ph
gsdistance_ed@jblfmu.edu.ph
www.jblfmu.edu.ph

May 23, 2023

TO WHOM IT MAY CONCERN:

This certifies that **MR. QUIRINO T. AGANG JR.** passed the pre-oral dissertation defense last May 17, 2023.

His approved dissertation title is "Usefulness of Gamification, Technology Proficiency and Self-Efficacy Among Maritime Faculty: Bases for Development of Instructional Enhancement Program."

This certification is issued upon request for whatever good or legal purpose it may serve.

[Signature]
GENEVA M. ELER, Ed. D.
Dean

THE MARITIME VANGUARD
2019

MARINA

DepED
DEPARTMENT OF EDUCATION

IAMU

Microsoft

"We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, Environmental Protection, Pollution Prevention, and Social Responsibility, in our consistent drive to satisfy and strive to exceed stakeholders' needs and expectations."



Name: 3/E Porferio D. Bengel Jr.

“Cadets Awareness, Attitude, and Performance of Onboard Training in Maritime Institutions: Bases for Enhancement Program”

Date: May 23, 2023

**JOHN B. LACSON FOUNDATION MARITIME UNIVERSITY (AREVALO), INC.**
(formerly Iloilo Maritime Academy)
Sto. Niño Sur, Arevalo, Iloilo City 5000 Philippines
Fax/Tel No.: (63) (33) 336-10-80 / 323-54-63
Email add: alfred.espinosa@jblfmu.edu.ph/arevalo@jblfmu.edu.ph
Email add: graduateschool@jblfmu.edu.ph
gsdistance_ed@jblfmu.edu.ph
www.jblfmu.edu.ph



May 23, 2023

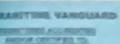
TO WHOM IT MAY CONCERN:

This certifies that **MR. PORFERIO D. BENDEL JR.** passed the pre-oral dissertation defense last May 17, 2023.

His approved dissertation title is “Cadets Awareness, Attitude, and Performance of Onboard Training in Maritime Institutions: Bases for Enhancement Program.”

This certification is issued upon request for whatever good or legal purpose it may serve.


GENEVA M. ELER, Ed. D.
Dean












"We are committed to continually aim for the highest standards of Quality Education and Training taking into account relevant educational, scientific, and technical developments, Managing Intellectual Property, Health, Safety, Environmental Protection, Pollution Prevention, and Social Responsibility, in our consistent drive to satisfy and strive to exceed stakeholders' needs and expectations."

Name: **GEFILLOYD L. De CASTRO**

Journal Name: Lasallian Institute for Development and Educational Research (LIDER), De La Salle University

Research Title: Vocabulary Notebook for Teaching and Learning Technical Vocabulary

Publication Date: 2019



CONFERENCE PROCEEDINGS

ARAL 2019

Vocabulary Notebook for Teaching and Learning Technical Vocabulary

Gefilloyd L. De Castro

Zamboanga State College of Marine Sciences and Technology

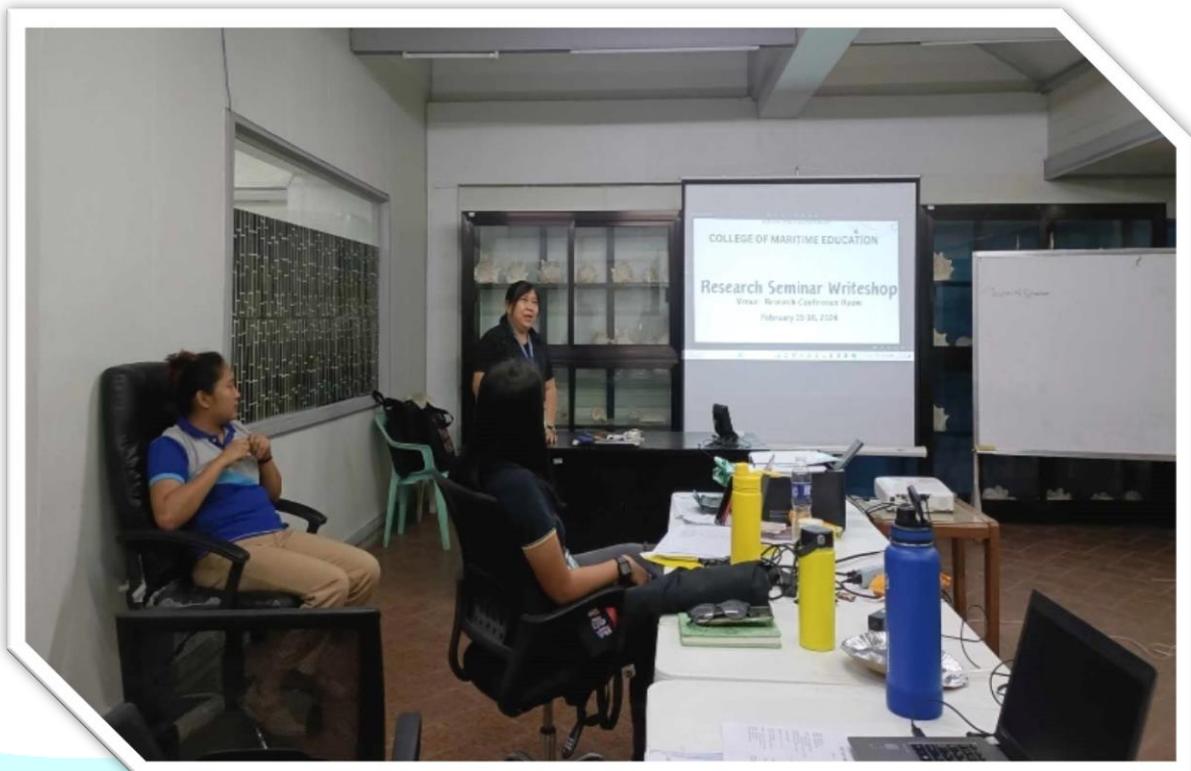
aaohsidyep812@gmail.com

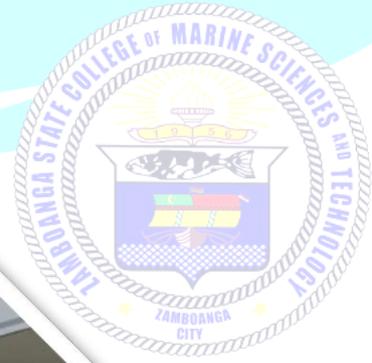
Abstract. While teaching specialized/technical (henceforth technical) vocabulary is pivotal for learners to be effective in the target situation, it is one of the most challenging tasks English for Specific Purposes (ESP) practitioners must surpass. The present study sought to determine (1) the effectiveness of vocabulary notebook in the development of students' technical vocabulary in the target context, and (2) the students' perceptions of the vocabulary notebook as a potential teaching and learning tool. A mixed method was employed. A total of 188 third year college students participated in this study. This study identified positive outcomes both from the scores and experience of the students, which imply that the vocabulary notebook was generally effective, particularly for technical vocabulary acquisition and retention. This study posits that the use vocabulary notebook for technical vocabulary acquisition makes the teaching and learning of the language meaningful and relevant to the target context. The study suggests methodological process for implementing vocabulary notebook in language teaching.

ACTIVITIES

The College of Maritime Education organized a Research Seminar Write shop exclusively for its faculty members, aiming to enhance research skills and foster collaboration within the academic community.

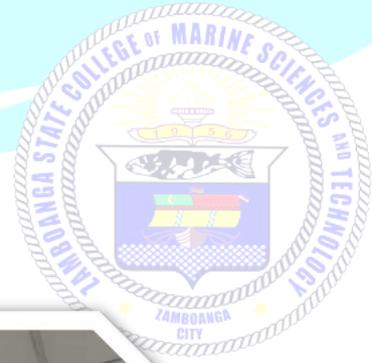
- Research Seminar Write shop for CME
February 15-16, 2024





The Research Seminar Write shop provided a platform for faculty members to strengthen their research skills, foster collaboration, and advance scholarly work within the College of Maritime Education. By investing in research capacity-building initiatives, the college aims to contribute significantly to the advancement of maritime education and practice.

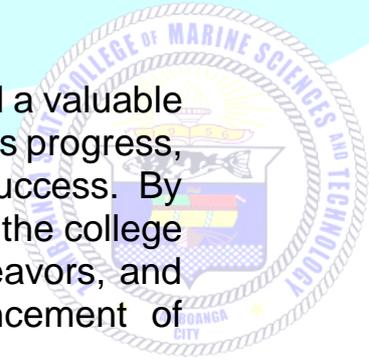
The College of Maritime Education recently conducted a Mid-year Strategic Planning and Workshop aimed at reviewing and refining its strategic objectives and action plans.



- Mid-year Strategic Planning and workshop
September 25-27, 2023



The Mid-year Strategic Planning and Workshop provided a valuable opportunity for the College of Maritime Education to reflect on its progress, identify strategic priorities, and chart a course for future success. By leveraging the insights gained from this collaborative process, the college is poised to enhance its educational offerings, research endeavors, and industry engagement, ultimately contributing to the advancement of maritime education and practice.



The Office of the Vice President research innovation and extension of Zamboanga State College of Marine Sciences and Technology (ZSCMST) hosted a Write shop focused on crafting effective research proposals with an emphasis on incorporating future thinking strategies.

- ZSCMST Write shop on Crafting Effective Research Proposal Incorporating Future Thinking (November 13-15,2023)





*Zamboanga State College of Marine Sciences and Technology
through the
Office of the Vice President for Research, Innovation and Extension,
Research and Development Office
and
Center for Continuing Education*

WRITESHOP ON CRAFTING EFFECTIVE RESEARCH PROPOSAL INCORPORATING FUTURES THINKING

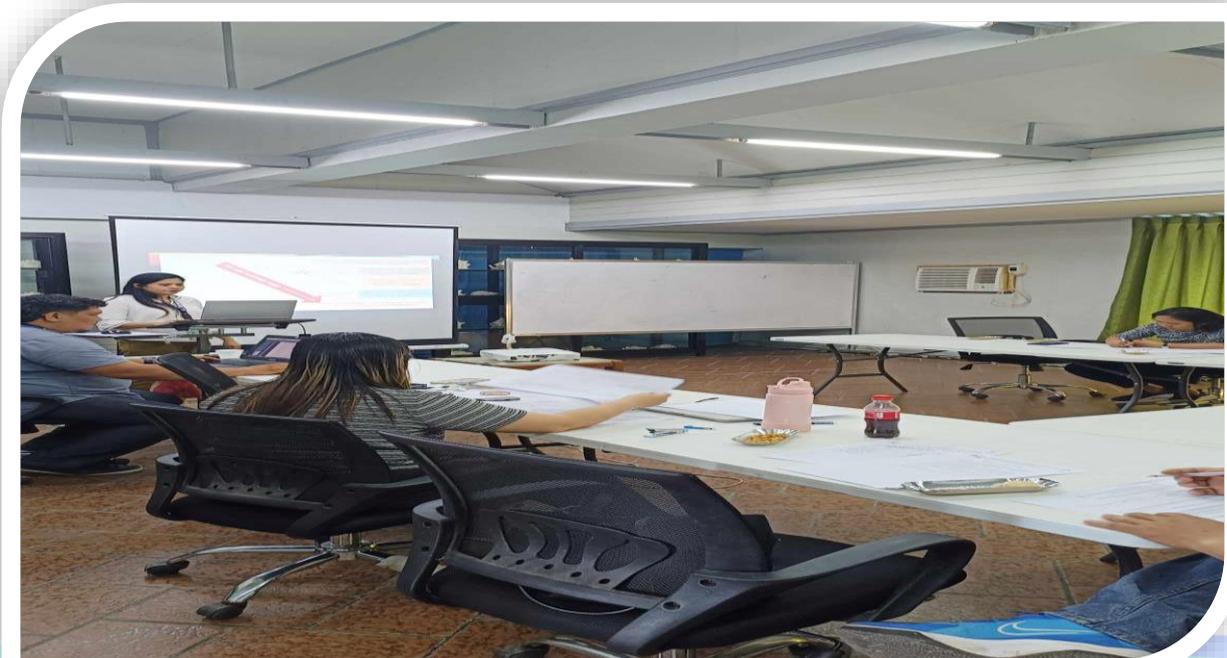


The Write shop on Crafting Effective Research Proposal Incorporating Future Thinking provided participants with valuable insights and tools for Anticipating and addressing future challenges in marine sciences research. By fostering a forward-looking mindset and equipping researchers with the necessary skills, ZSCMST aims to contribute to the advancement of knowledge and sustainable development in marine sciences and related fields.

Future projects (results of the write shop, Strat plan, futures thinking and CME Research Write shop) - Number of research proposals prepared and submitted to the research committee

- The Filipina Seafarer: Surviving a man-centered world.

Name: **3/E MARY ROSE DE LA CRUZ**



- Assessing and Mitigating Marine Pollution within Zamboanga City and Jolo, Sulu: A Comprehensive Study

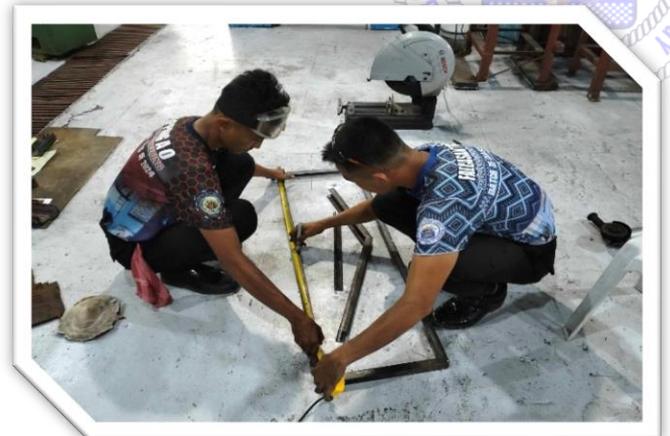
Name: **3/E IVAN P. MARTINEZ**



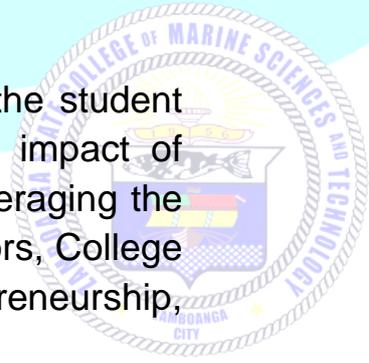
These research proposals represent the dedication and expertise of our CORE faculty members in addressing critical issues facing the maritime sector. By advancing knowledge and fostering innovation, these projects have the potential to make significant contributions to both academia and industry practice. We look forward to further developing and implementing these initiatives with the support of our partners and stakeholders.

A marketable item resulting from a student project at college of maritime Education. The project aimed to develop innovative solutions to real-world problems while providing students with practical experience and skills relevant to their future careers. The marketable item identified from the project demonstrates the creativity, ingenuity, and entrepreneurial spirit of the students involved.

➤ **Marketable**



The identification of a marketable item resulting from the student project demonstrates the practical relevance and potential impact of academic initiatives at College of Maritime Education. By leveraging the creativity, skills, and expertise of students, faculty, and advisors, College of Maritime Education. aims to foster innovation and entrepreneurship, ultimately contributing to societal and economic development.



RESEARCH INCENTIVES

At Zamboanga State College of Marine Sciences and Technology (ZSCMST), recognizing and incentivizing research excellence is paramount to fostering a vibrant culture of innovation and scholarly inquiry. This report outlines the researcher incentives implemented by ZSCMST to support and motivate faculty members and researchers in their pursuit of academic and research endeavors.

 Republic of the Philippines
ZAMBOANGA STATE COLLEGE OF MARINE SCIENCES AND TECHNOLOGY
Fort Pilar, Zamboanga City

Excerpts from the minutes of the 87th Regular Meeting of the Board of Trustees, Zamboanga State College of Marine Sciences and Technology held at the Board Room, Zamboanga City State Polytechnic College, Zamboanga City, September 23, 2009, 8:00AM

On motion duly made, seconded and carried, the Board passed:

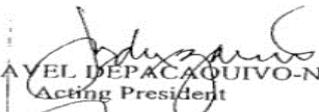
Resolution No. 83, s. 2009

Approving the implementation of the ZSCMST Manual on Research Operation provided suggestion made by the Board be incorporated thereat.

CONFIRMED

CERTIFIED TRUE AND CORRECT:

FELICITAS C. URIAN
Board Secretary

NOTED BY: 
MILAYEL DEPACACQUIVO-NAZARIO, Ed.D.
Acting President

ATTESTED: 
HJA. LUNINGNING MISUAREZ-UMAR, Ed.D.
CHED Commissioner
Chair-Designate, ZSCMST BOT
Presiding Officer



Republic of the Philippines
ZAMBOANGA STATE COLLEGE OF MARINE SCIENCES AND TECHNOLOGY
Fort Pilar, Zamboanga City

Tel No. (062) 992-3092 Telefax: (062) 991-0777 website: <http://www.zscmst.edu.ph>

Joint Administrative and Academic Councils Resolution

No.6, s. 2009

WHEREAS, the Administrative Council convened on July 30, 2009 to deliberate on the ZSCMST Manual on Research Operation, a copy of which was furnished to Council members beforehand for advance review

WHEREAS, the Presentor convinced the Administrative Council the need of the Manual for the successful implementation of the College research agenda.

WHEREAS, the Council deliberated on the Goals and Objectives, Expected Outputs as well as the Guidelines on the Conduct of Research Activities and other concerns.

WHEREAS, several comments, suggestions and clarification were made and answered,

WHEREAS, the Administrative Council on motion duly seconded, approved the Manual for presentation to the Academic Council and subsequent Board of Trustees approval;

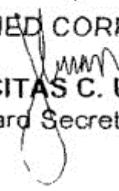
WHEREAS, the Academic Council met on September 14, 2009 at the AVR to discuss various academic concerns one of which was the Manual on Research Operation;

WHEREAS, the Academic Council, after thorough deliberation approved the Research Manual for endorsement to the Board of Trustees;

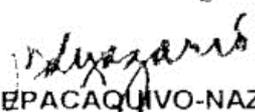
Now therefore **RESOLVED** as it is hereby **RESOLVE** to endorse to the ZSCMST Board of Trustees for approval the ZSCMST Manual on Research Operation

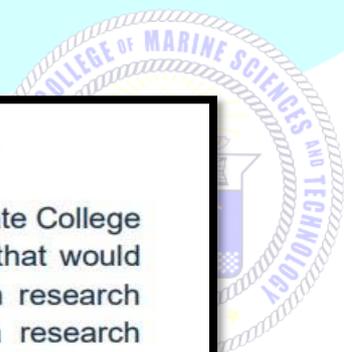
Done this 14th day of September, 2009 at the Audio Visual Room, ZSCMST, Zamboanga City

CERTIFIED CORRECT


FELICITAS C. URIAN
Board Secretary

ATTESTED:


MILAVEL DE PACACQUIVO-NAZARIO, Ed.D.
Acting President



XI. Incentives for the Promotion of Research and Extension Activities

The need to develop a strong research culture in the Zamboanga State College of Marine Sciences and Technology calls for the provision of incentives that would encourage the College faculty and employees to be actively involved in research activities. An employee of the College who is authorized to conduct a research project/study may be receive and enjoy the following remunerations and benefits:

11.1 Honoraria

The College shall adopt the Scheme of Honoraria of the Department of Science and Technology (DOST) and those mandated by National Compensation Circular No. 75 governing the conduct of research projects subject to the availability of funds allocated for the purpose.

11.1.1 Externally (GIA)-funded projects

Researchers will receive honoraria based on the budget approved by the funding institution. In addition, he shall enjoy the non-monetary benefits granted by the College to faculty and staff undertaking a research project/study.

11.1.2 College-funded projects

Research or other special projects that may be funded by the College shall adopt the existing compensation schemes provided by the

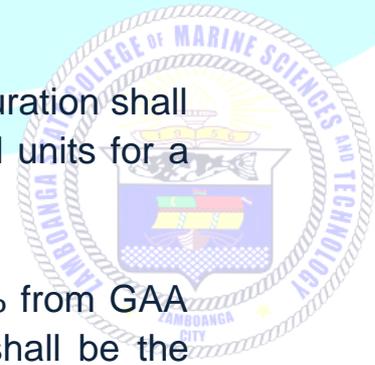
DOST and the Department of Budget and Management whichever is applicable.

11.2 De-loading or reduced teaching load or release time

A faculty member of the College involved in the conduct of approved research project shall enjoy a deloading of six-unit teaching load for a projector study of one (1) year duration. The reduced teaching load for those involved in projects with less than one (1) year duration shall be computed proportionately based on the optimum de-loaded units for a one year research project or study.

A faculty member of the College involved in the conduct of an approved research project shall enjoy a de-loading of a six-unit teaching load for a projector study of one (1) year duration. The reduced teaching

load for those involved in projects with less than one (1) year duration shall be computed proportionately based on the optimum de-loaded units for a one-year research project or study.



1. A Research budget of 10% from ZSCMST income and 10% from GAA shall be allocated for purposes of research projects and shall be the ZSCMST Research Budget Account.
2. Administrative Costs of not more than 15% of the total budgetary requirements of a research project shall be allocated per research project chargeable to the research budget allocations from 10% of the ZSCMST income and/or 10% from GAA to cover honoraria for research staff, assistants, consultant, and other directly involved research personnel subject to the approval of the ZSCMST President.
3. 3., 4., and 5 on cash incentives for research papers presented or published in (a) in-house forum proceedings of in-house forum, reviews, and other research gatherings =P2,000.00 (b) national research forum =P20,000.00 and (c) international refereed journals or research forum =P30,000.00.
6. In recognition of perceived exemplary and commendable research efforts, boosting and catapulting the image, integrity, and placing ZSCMST in the national or international research roadmap, each Program Leader/Project Leader who is the author of the research project(s) and who received funding for research project(s) from line agencies (DOST, PCAMRD, NEDA, DA, CHED, BAR, ETC.) or LGUs or NGOs or foreign assisted or grants-in-aid (JICA, CIDA, USAID, ETC.) shall be given a plaque or recognition, a trophy and cash incentive of Pp 10,000.00 whose approved total research budget is equal to or greater than one million and five hundred thousand pesos (\geq Pp 1,500,000.00).
7. A cash incentive of Pp 10,000.00 for a published research paper cited in another research paper in a refereed national or international journal which can be availed only once or one time only per research paper.
8. To defray expenses for the above-stipulated cash incentives, benefits,

awards, and rewards in the conduct of research projects/activities/works, a budgetary allocation of 10% from the ZSCMST INCOME shall be set aside and allocated for this purpose.



Ref.: Research Manual

Also, Under ZSCMST Faculty Manual stated at Chapter 2. "General Policies, Procedures and Guidelines", .4 "Faculty Work Load".

2.4.1.1 Regular Actual Teaching Load

1. Faculty members with permanent or temporary status but has no quasi-functions	21 hours actual teaching
--	--------------------------

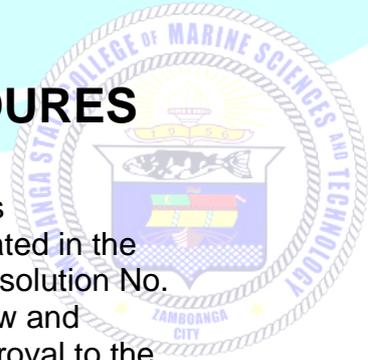
2.4.1.1.3B stated that The Faculty conducting approved institution/grant-aids researches/ extension works.

B. Faculty conducting approved institution/grant-aids researches/ extension works

Program Leader II	12 hrs/week
Project Leader	15 hrs/week
Researcher	18 hrs/week

4. SYSTEMATIC & EFFECTIVE PROCEDURES

The Research, Innovation, and Extension Office of ZSCMST in its implementation of institutional research is adopting the guidelines stipulated in the ZSCMST Manual on Research Operation approved by virtue of board resolution No. 83. S. 2009 (fig 7). The procedural guidelines include; submission, review and approval of research proposal wherein the proponent must undergo approval to the different offices prior to implementation. (fig 7).



Republic of the Philippines
ZAMBOANGA STATE COLLEGE OF MARINE SCIENCES AND TECHNOLOGY
Fort Pilar, Zamboanga City

Excerpts from the minutes of the 87th Regular Meeting of the Board of Trustees,
Zamboanga State College of Marine Sciences and Technology held at the Board
Room, Zamboanga City State Polytechnic College, Zamboanga City, September 23,
2009, 8:00AM

On motion duly made, seconded and carried, the Board passed:

Resolution No. 83, s. 2009

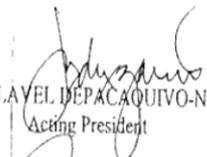
*Approving the implementation of the ZSCMST Manual on Research
Operation provided suggestion made by the Board be incorporated thereat*

CONFIRMED

CERTIFIED TRUE AND CORRECT:


FELICITAS C. URIAN
Board Secretary

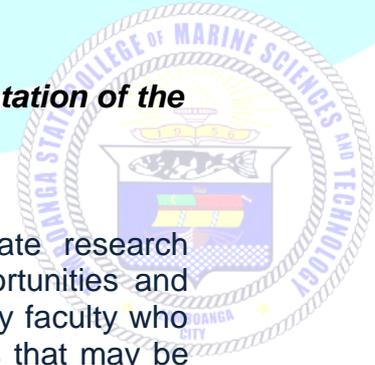
NOTED BY:


MILAVEL DE PACACQUIVO-NAZARIO, Ed.D.
Acting President

ATTESTED:


HJA. LUNINGNING MISUARES-DAMAR, Ed.D.
CHED Commissioner
Chair-Designate, ZSCMST BOT
Presiding Officer

Figure 6. Board resolution No. 83. S. 2009 approving the implementation of the ZSCMST Manual on Research Operation



1.. **Procedural guidelines** are hereby established to animate research activities in the College. These mechanisms aim to provide opportunities and financial support to promising researchers of the College particularly faculty who wish to upgrade their capabilities as well as earn significant points that may be used for faculty rank promotion pursuant to NBC No. 461.

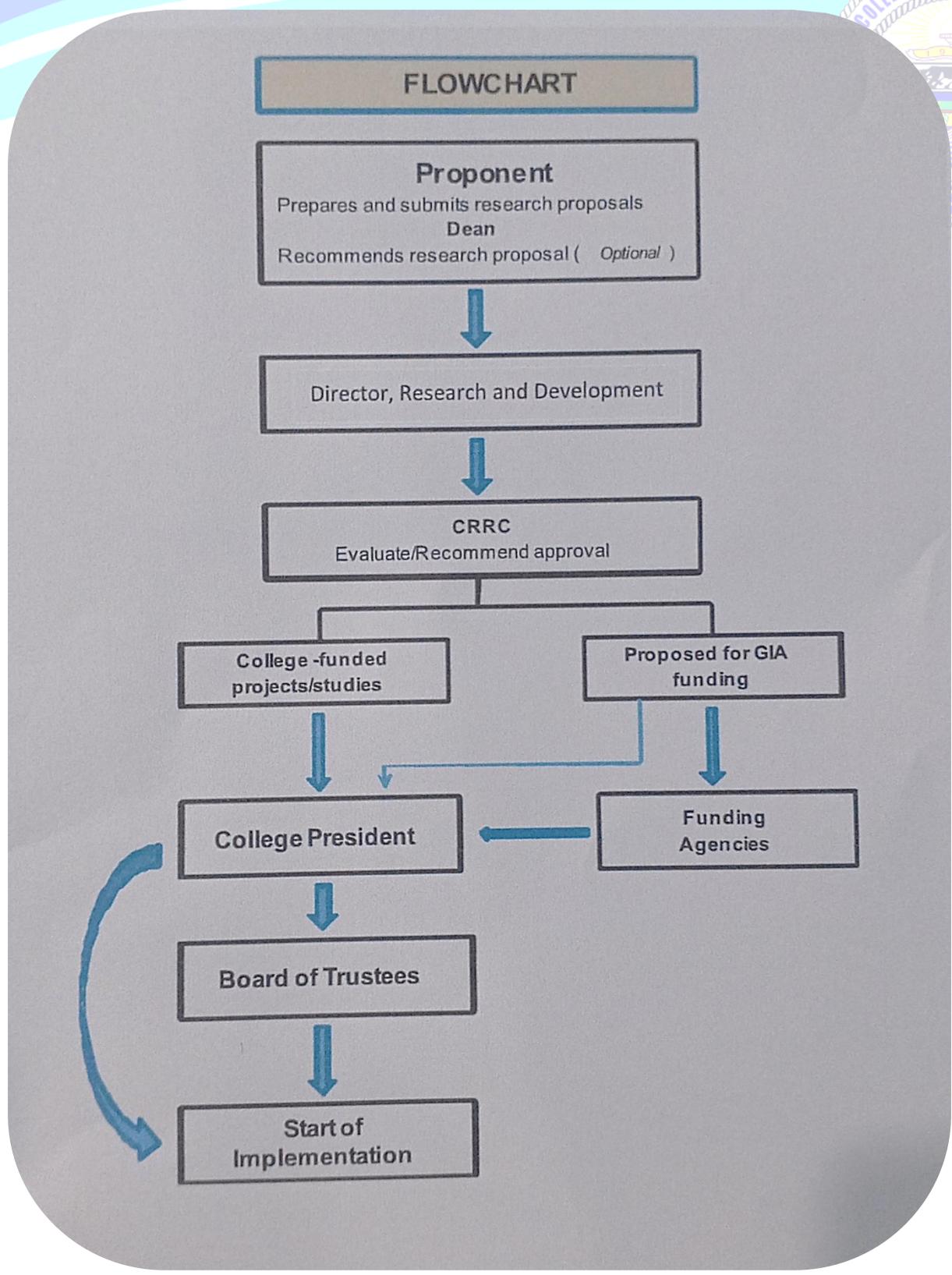
2. Proposal Submission, Review and Approval

The proponent shall submit his/her proposal to the Director, Research and Development who endorses the same to the College Research Review Committee (CRRC) for evaluation.

1. The CRRC evaluates the proposal based on the prescribed criteria. The funding source is identified and the proposal is recommended for approval as (i) College-funded study/project, or (ii) Candidate study/project for Grants-in-Aid (CGIA) funding. The CRRC identifies and recommends external fund sources for GIA-funded projects/studies.
2. All CRRC-approved college-funded study/project proposals shall be submitted to the Board of Trustees for approval.
3. The Director, of Research and Development shall be tasked to identify possible funding agencies where the proposal can be submitted.
4. The proponent will be informed of the action taken on his/her proposal and advice accordingly.
5. The College President approves the implementation of college-funded research studies/projects upon confirmation of the Board of Trustees.
6. The Office of Research Coordination shall serve as CRRC Secretariat and handle the monitoring and evaluation of ongoing research. The ORC also maintains a database of research implemented by the College.

Below is the systematic procedure

Figure 7. Systematic Procedure for research implantation



5. REASONABLE BUDGET

The Research, Extension and Innovation Office has a budget for Research Services allocated annually. The source of funds for research and other related activities is taken from Fund 101 and fund 164. In fiscal year 2022, the total amount approved for the year was **Php 2,991,254.85** and was notably increased to **Php 8,964,940.00** in the year 2023.



BUDGET REPORT 2023 FOR RESEARCH SERVICES

Summary of Report of Utilization for Research Services FOR FUND 101 and FUND 164				
Particulars	Approved Budget for the Year	Amount of Utilization for the Year	Of Unutilized Balance for the Year	Percentage of Utilization
FISCAL YEAR 2023				
FUND 101 - GAA				
PS	-	-	-	-
MOOE	2,083,000.00	2,083,000.00	-	100%
Local Travel	200,000.00	200,000.00	-	
Training Expenses	200,000.00	200,000.00	-	
Office Supplies Expense	183,000.00	183,000.00	-	
Water Expenses	100,000.00	100,000.00	-	
Electricity Expenses	400,000.00	400,000.00	-	
Other MOOE- FT	1,000,000.00	1,000,000.00	-	
CAPITAL OUTLAY	4,000,000.00	3,960,000.00	40,000.00	99.00%
TOTAL AMOUNT	6,083,000.00	6,043,000.00	40,000.00	99.34%
FUND 164-STF				
PS	713,713.00	713,713.00	-	100%
Salaries and Wages	713,713.00	713,713.00	-	
MOOE	1,718,227.00	1,329,050.57	389,176.43	77.35%
Local Travel	500,000.00	498,210.14	1,789.86	
Training Expenses	468,227.00	463,038.50	5,188.50	
Office Supplies Expense	150,000.00	85,784.31	64,215.69	
Other MOOE	600,000.00	282,017.62	317,982.38	
CAPITAL OUTLAY	450,000.00	99,996.00	350,004.00	22.22%
Office Equipment	450,000.00	99,996.00	350,004.00	
TOTAL AMOUNT	2,881,940.00	2,142,759.57	739,180.43	74.35%
TOTAL	8,964,940.00	8,185,759.57	779,180.43	91.31%

6. PROVISION OF MATERIALS & OTHER RESOURCES



Images Shown outlines the strategy for the provision of materials and other resources to support future research initiatives within college of maritime Education. It aims to ensure that researchers have access to the necessary materials, equipment, and facilities to conduct high-quality research and drive innovation in their respective fields.



Marine Engineering Auxiliary Machineries

Refrigeration System with A complete components/parts



Process Control System



Pneumatic Control System



Pneumatic Control System



Automation Computer Room



Lathe Machine



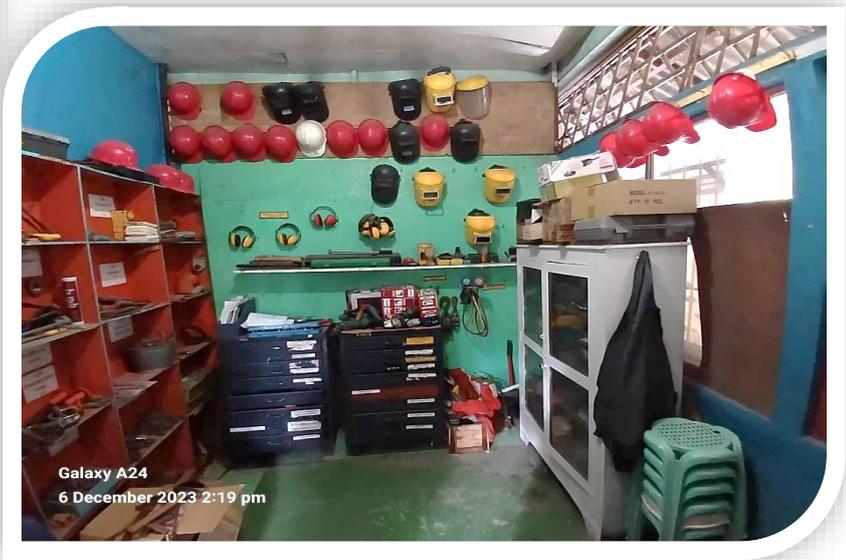
Galaxy A24
6 December 2023 11:17 am

Drilling Machine



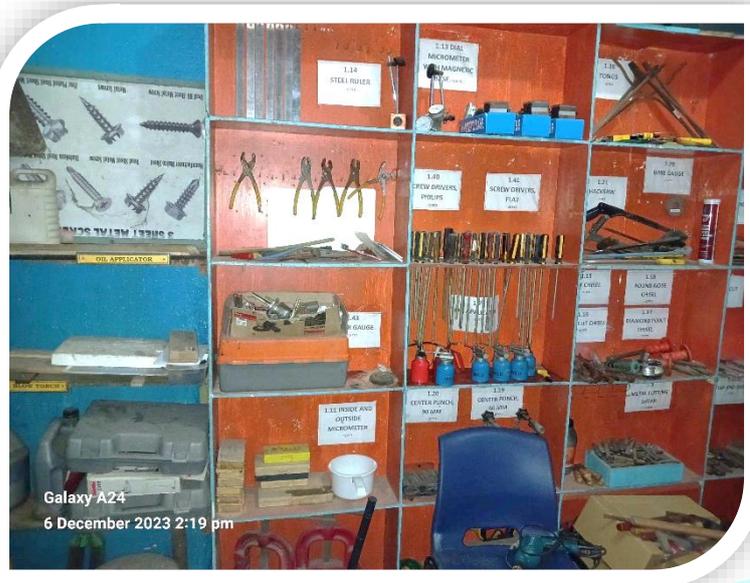
Galaxy A24
6 December 2023 11:20 am

Personal Protective Equipment and Tool Room



Galaxy A24
6 December 2023 2:19 pm

Tools



Galaxy A24
6 December 2023 2:19 pm

CNC Machine



Galaxy A24
6 December 2023 5:15 pm



Lifeboat

Metal Bollard



7. PARTICIPATION OF SIGNIFICANT NUMBER OF FACULTY/ STAFF/ STUDENTS/COMMUNITIES IN MAJOR PROJECTS/ACTIVITIES



- Mid-year Strategic Planning and workshop September 25-27, 2023

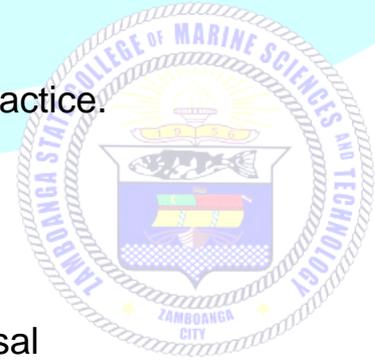


The College of Maritime Education recently conducted a Mid-year Strategic Planning and Workshop aimed at reviewing and refining its strategic objectives and action plans.

The Mid-year Strategic Planning and Workshop provided a valuable opportunity for the College of Maritime Education to reflect on its progress, identify strategic priorities, and chart a course for future success. By leveraging the insights gained from this collaborative process, the college is poised to enhance its educational offerings, research endeavors, and industry engagement, ultimately



contributing to the advancement of maritime education and practice.



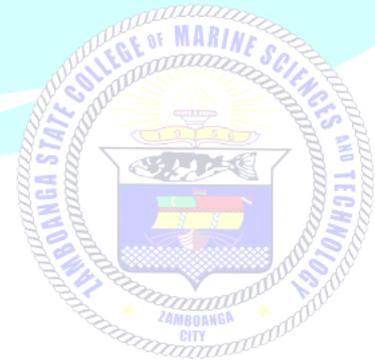
- ZSCMST Writeshop on Crafting Effective Research Proposal Incorporating Future Thinking (November 13-15, 2023)



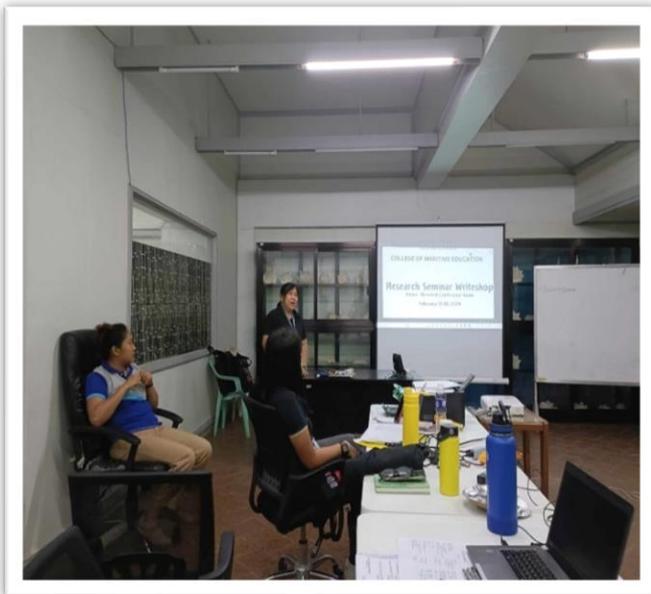
The Office of the Vice President research innovation and extension of Zamboanga State College of Marine Sciences and Technology (ZSCMST) hosted a Writeshop focused on crafting effective research proposals with an emphasis on incorporating future thinking strategies.

The Writeshop on Crafting Effective Research Proposal Incorporating Future Thinking provided participants with valuable insights and tools for Anticipating and addressing future challenges in marine sciences research. By fostering a forward-looking mindset and equipping researchers with the necessary skills, ZSCMST aims to contribute to the advancement of knowledge and sustainable development in marine sciences and related fields.





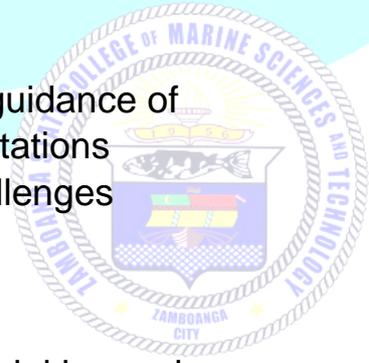
➤ Research Seminar Writeshop for CME
February 15-16, 2024



The College of Maritime Education organized a Research Seminar Writeshop exclusively for its faculty members, aiming to enhance research skills and foster collaboration within the academic community.

The Research Seminar Writeshop provided a platform for faculty members to strengthen their research skills, foster collaboration, and advance scholarly work within the College of Maritime Education. By investing in research capacity-building initiatives, the college aims to contribute significantly to the advancement of maritime education and practice.





Participants to work on their research manuscripts under the guidance of seasoned researchers and educators. The one-on-one consultations facilitated a personalized approach, addressing individual challenges and refining research

Future projects (results of the writeshop, strat plan, futures thinking and CME Research Writeshop) - Number of research proposals prepared and submitted to the research committee



3/E MARY ROSE DE LA CRUZ

➤ The Filipina Seafarer: Surviving a man-centered world.

RISK 0 - YDEKA - PSM T

Concept Title	What is the Independent Variable/s?	What is the Dependent Variables/s	How are they related? Mechanism/Relation?
The Impact of Effective Performance Management on Employee Engagement and Organizational Performance	*Implementation of Performance Management Systems * Leadership Style and Support * Training and Development Initiatives	Employee Retention	Social fit has stronger effects on overall job performance than employee retention
The Role and Impact of Skills-Based Certification Programs in Enhancing Workforce Competency and Productivity	*Participation in Certification Programs * Availability of Training Resources	Participation in Certification Programs	It gained life-essential skills, including career-based, health-related, and emergency skills, through undergoing rigorous training programs.
Strategies for Hazard Mitigation and Employee Well-being	*Implementation of Hazard Mitigation Strategies	*Employee Health and Safety Incidents	The stakeholder management, communication and cooperation are the most important influencing aspects.

2/M MORRIS BANUA

- Blue Horizons: A Comprehensive Exploration into Maritime Pollution within the Port of Zamboanga City



3/E IVAN P. MARTINEZ

- Assessing and Mitigating Marine Pollution within Zamboanga City and Jolo, Sulu: A Comprehensive Study





2/M RISIL YBERA

- Investigating Maritime Transport Safety Selected Domestic Philippine-Based Ships

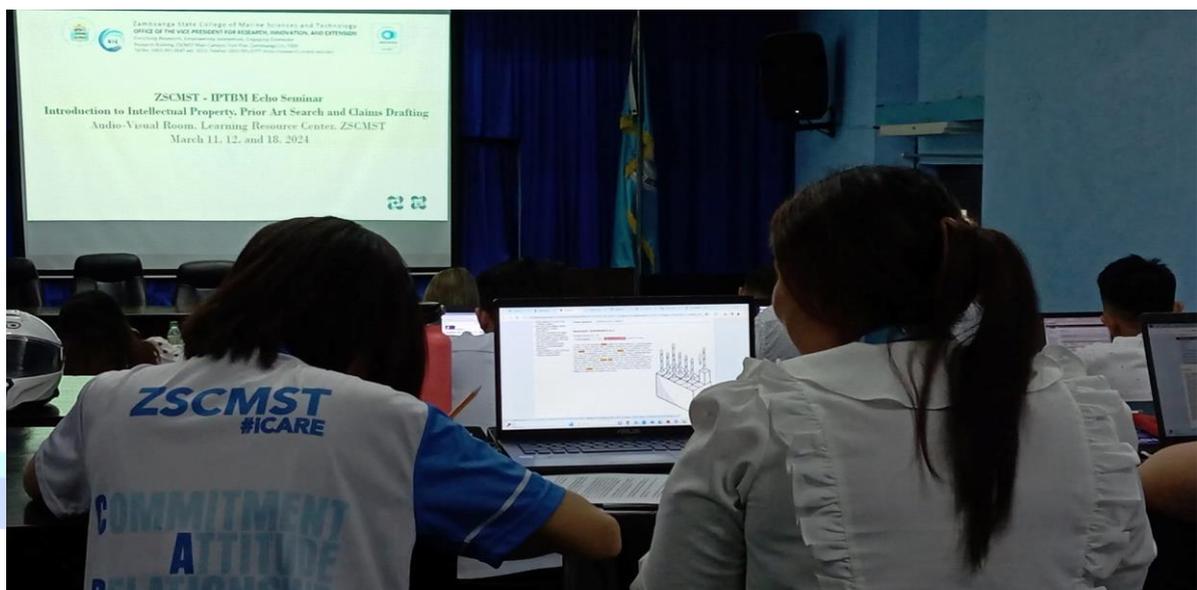


These research proposals represent the dedication and expertise of our CORE faculty members in addressing critical issues facing the maritime sector. By advancing knowledge and fostering innovation, these projects have the potential to make significant contributions to both academia and industry practice. We look forward to further developing and implementing these initiatives with the support of our partners and stakeholders.

IPTBM Echo Seminar: Introduction to Intellectual Property, Prior Art Search, and Claims Drafting was conducted on March 11 to 12 and 18, 2024 at the ZSCMST Audio Visual Room.

IPTBM Echo Seminar: The seminar empowers faculty with knowledge and skills to identify, protect, and leverage their research outputs through UMs.

This encourages a proactive approach to innovation, ultimately increasing the number of UM applications and fostering a culture of applied research and IP protection within the institution.





Technology Promotion Mentorship Series Echo Seminar
September 3-4, 2024

Participants from the College of Maritime Education, the College of Management and Technology, and the College of Fisheries and Marine Sciences, as well as staff from the Public Information and Communications Office, were trained to enhance their communication skills to persuasively deliver their pitch to their target market.



 Zscmst IPTBM

 tic_iptbm@zscmst.edu.ph

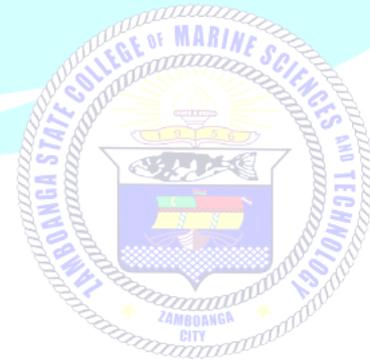
SiyenSaya

(CME) College Of Maritime Education

(CFMS) College of Fisheries Marine Sciences

September 18-22, 2023

September 23-31, 2023



In a vibrant convergence of maritime expertise and ecological advocacy, the College of Maritime Education (CME) is thrilled to announce an innovative collaboration with the College of Fisheries Marine Sciences (CFMS) for an inspiring SiyenSaya activity. Embracing the resonant theme of "Kapuluhan, Kabuluhan, Kaunlaran," this collaborative endeavor is designed to ignite a passion for research and exploration among students while fostering a deeper understanding of the interconnectedness between maritime environments and community prosperity.

SiyenSaya
Siyensya para sa Saganang Yaman
2023

celebrates
Maritime & Archipelagic Nations Month
Theme: "Kapuluhan, Kabuluhan, Kaunlaran"

 60th Fish Conservation Week <i>Managing Food Safety, Nutrition and Economy</i> September 18-22	 24th National Maritime Week September 23-31
Sept 18 MON BFAR's Slogan and Poster Making Contest	Sept 23 SAT Coastal Clean-Up Kick Off Talk (MARINA)
Sept 19 TUE BFAR's Fish N Learn & Teach In	Sept 24 SUN MaLusog (Marinong Malusog) Sports Fest
Sept 20 WED FishArt (Art N Fisheries) RIE Gustaku Fish Pointing, Infograph Making and TechTalks	Sept 25 MON MarSay 1 (Marinong Mahusay) Quiz Bowl and Skills Competition Film Viewing
Sept 21 THU FishTa (Skills Showcase) CFMS Program Products Research Proposal Help Desk	Sept 26 TUE MarSay 2 (Marinong Mahusay) Slogan and Poster Making Contest Drills and Mock Exercises
Sept 22 FRI FishFun RIE Center Showcase and Contests (CRMC, FPIC, & FRC)	Sept 27 WED MarUnong (Marinong Madunong) Maritime Technology Talks Lab Tours
Sept 23 SAT Coastal Clean-Up TechTalks (BFAR)	Sept 28 THU MaLamang (Marinong may Lamang) Boat Building, Model Ship Racing, Engine assembly and Diagnostics Prototype Exhibits and Info Booths

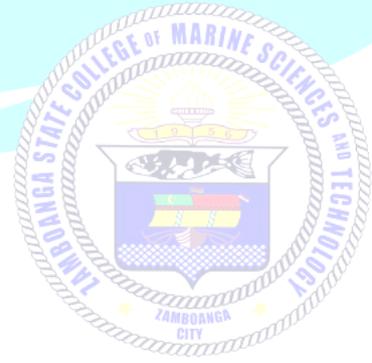
ZSCMST's Marine and Maritime Research:
Embracing our Mandate and Serving our Call in the Region
September 29, Friday

Fun Run, Awarding, and Closing Program
September 30, Saturday

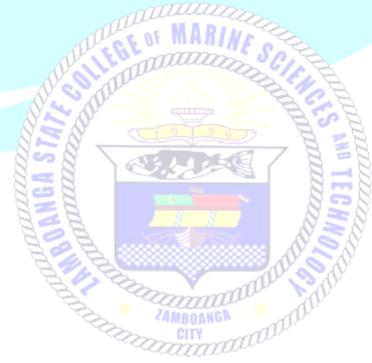


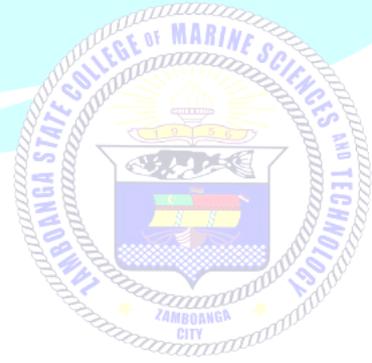


"Kapuluan, Kabuluhan, Kaunlaran" serves as a poignant reminder of the intrinsic link between our island nation's natural abundance, socio-economic progress, and ecological resilience. Through a series of engaging activities and thought-provoking discussions, we seek to unravel the complexities of this theme and empower students to become catalysts for positive change in their communities.

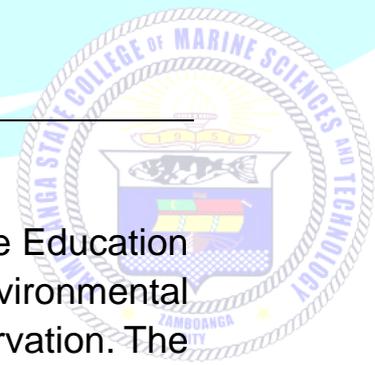


At the heart of our collaboration lies a shared commitment to nurturing a culture of inquiry and academic excellence among students. Through mentorship programs, research symposiums, and hands-on fieldwork opportunities, CME and CFMS will provide students with the tools and resources they need to embark on meaningful research projects that address pressing issues facing our coastal ecosystems.





As we embark on this collaborative journey of discovery and empowerment, the College of Maritime Education and the College of Fisheries Marine Sciences invite students to join us in embracing the spirit of "Kapuluan, Kabuluhan, Kaunlaran." Together, let us chart a course towards a future where research excellence and community prosperity go hand in hand, guiding us towards a brighter and more sustainable tomorrow.



In celebration of Maritime Week, the College of Maritime Education organized a coastal clean-up initiative to promote environmental awareness and demonstrate our commitment to marine conservation. The primary objective was to remove debris and waste from the coastal area, thereby contributing to the preservation of marine ecosystems and promoting sustainable practices among our students and staff.



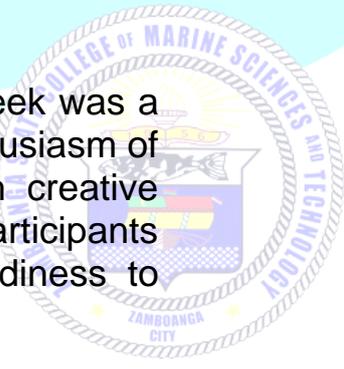


The coastal clean-up organized by the College of Maritime Education during Maritime Week was a resounding success, underscoring our dedication to environmental stewardship and sustainability. Moving forward, we remain committed to promoting eco-friendly practices and engaging in initiatives that contribute to the protection and preservation of our marine environment.

In celebration of Maritime Week, the College of Maritime Education hosted a thrilling Miniature Boat Competition aimed at fostering creativity, teamwork, and technical skills among students. The primary objective was to provide participants with an opportunity to design, build, and race miniature boats, thereby promoting hands-on learning and encouraging innovation within the maritime community.



The Miniature Boat Competition held during Maritime Week was a resounding success, showcasing the talent, ingenuity, and enthusiasm of students within the College of Maritime Education. Through creative design, meticulous craftsmanship, and spirited competition, participants demonstrated their commitment to excellence and their readiness to embark on future endeavors within the maritime sector.

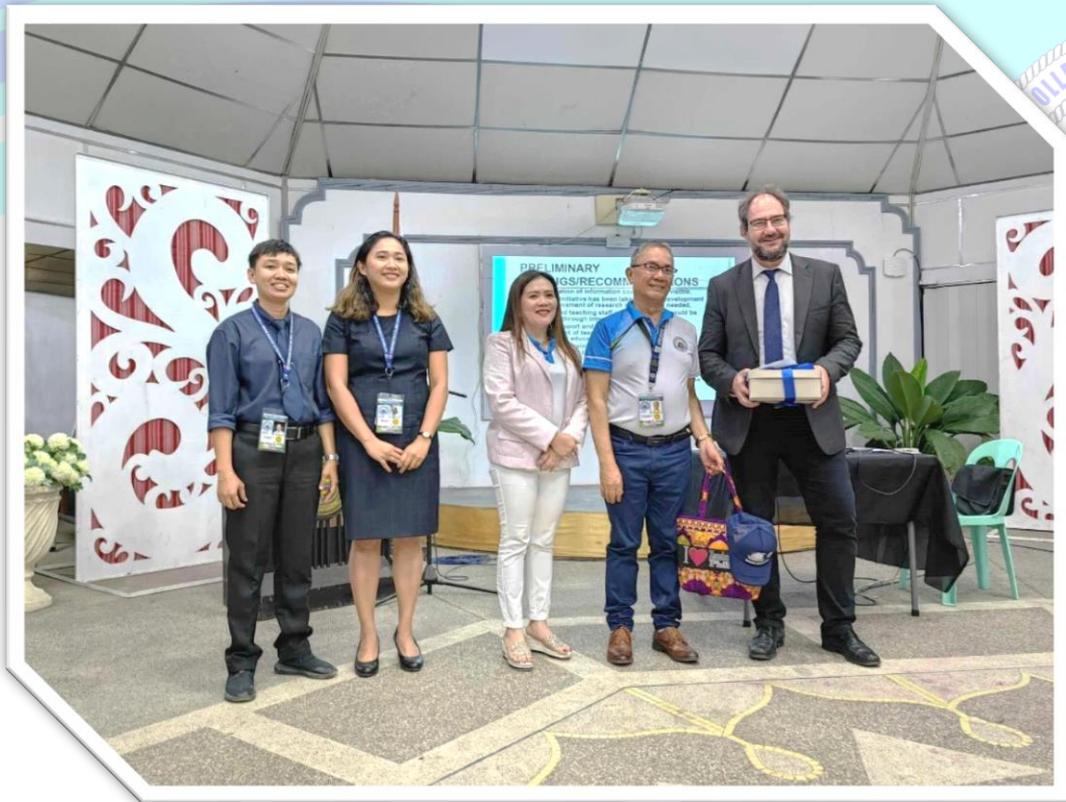


Moving forward, the College remains dedicated to providing opportunities for experiential learning, fostering innovation, and nurturing the next generation of maritime professionals who will shape the future of the maritime industry.

The site visit conducted by the International Association of Maritime Universities (IAMU) under the Program Assessment and Evaluation System (PAES) together with MARINA Central Office aimed to assess the academic programs, facilities, and overall performance of the Zamboanga State College of Marine Sciences and technology (ZSCMST) in alignment with IAMU standards and best practices. The primary objective was to provide constructive feedback and recommendations to enhance the quality of maritime education and training at ZSCMST.



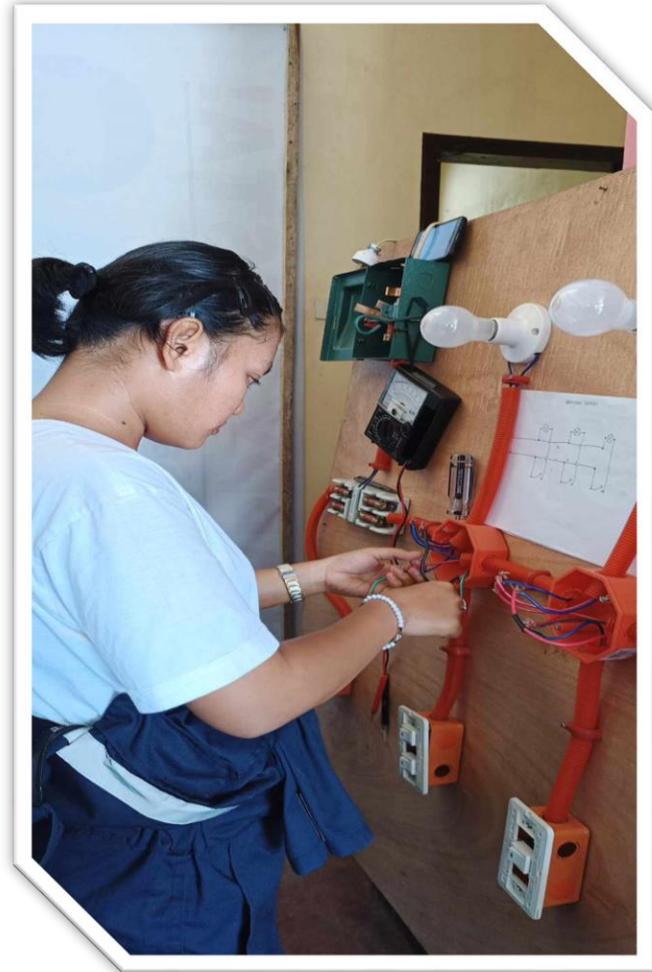
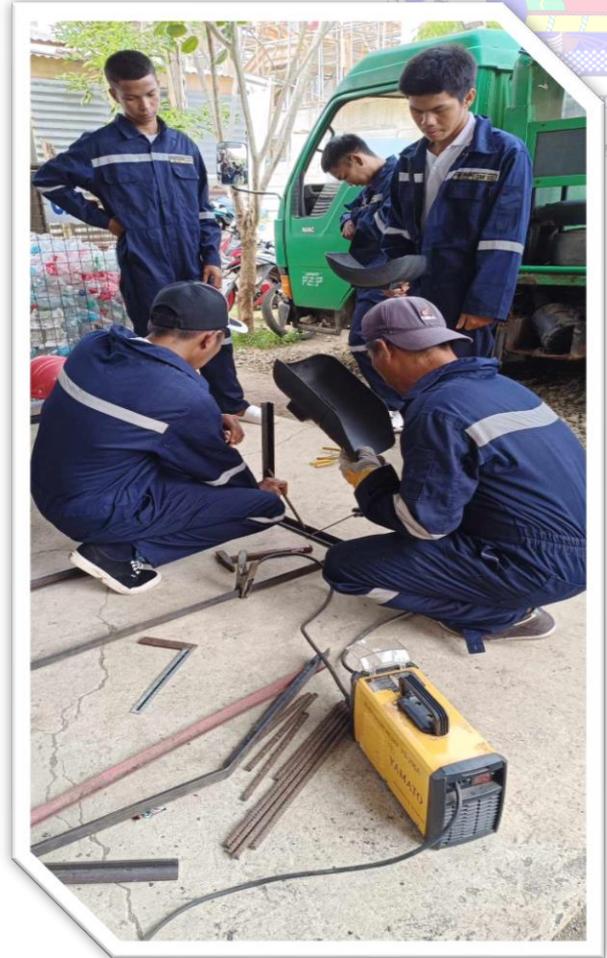


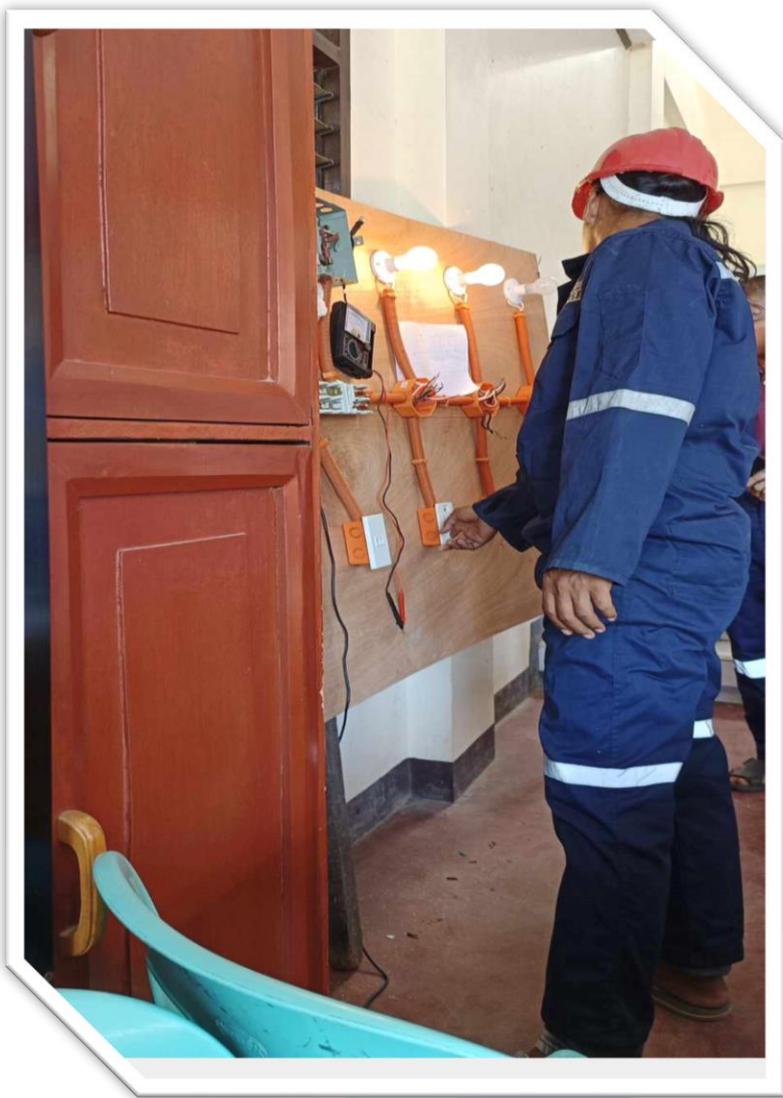


The IAMU PAES site visit at the Zamboanga State College of Maritime Education provided valuable insights into the college's strengths and areas for improvement in delivering high-quality maritime education and training. The collaborative assessment process fostered dialogue, sharing of best practices, and mutual learning between IAMU assessors and ZSCMST stakeholders, underscoring the commitment to continuous improvement and excellence in maritime education.

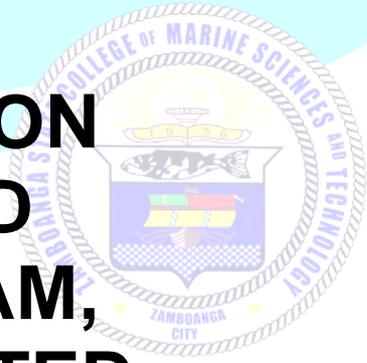
Moving forward, ZSCMST is poised to implement the recommendations provided by IAMU to further enhance its academic programs, facilities, and student support services, thereby reaffirming its position as a leading institution in maritime education and training.

CME Marino-techs extension program welding and wiring training
Dec15-17,2024





8. AWARDS OF DISTINCTION AND ACHIEVEMENT AND GRANTS OF THE PROGRAM, “BEST PRACTICES” ADOPTED



Congratulations!

BEST PAPER PRESENTATION

together with our College President (L)Dr. Jaime G. Jalon

AWARDEES

Mr. Sina A. Sahidaini

Artificial Intelligence:Data Science and Analytics:Energy and Environment

Dr. Servando D. Halili Jr.

National Gender and Development Research Congress

Dr. Jesus Rolando A. Samson

1st Runner-Up Research Category in the 2019 Regional Symposium on Research and Development Highlights " Spatial and Temporal Distribution, Size composition and Abundance of oval Squid."



Electrical Power Quality Improvement through Modeling and Optimization of Passive Harmonic Filter

Sina A. Sahidaini

Department of Electrical Engineering, College of Engineering
Mindanao State University-IIT
Iligan City, Philippines
College of Maritime Education
Zamboanga State College of Marine Sciences and Technology
Zamboanga City, Philippines

Abstract— This paper studies on the harmonic distortion and the methods to mitigate the harmonics for a system with Load variation and different harmonic distortion level. A group of passive shunt filter are designed to reduce harmonic distortion and correct power factor. The proposed method optimize the group filter configuration which is suitable for load and distortion level variation to get best scenario out of passive harmonic filters. Maximum level for power factor as long as it is positive, consider as constraint and minimizing harmonics distortion index such as Total Harmonic Distortion (THD) and its Individual Harmonic Distortion (IHD) content are factors for objective function. Genetic Algorithm has been used as Optimization technique and software to simulate are MATLAB for genetic algorithm and ETAP for filter simulation in power system.

Keywords--Load Variation, Harmonic Distortion, Power Quality.

I. INTRODUCTION

Recently, there is an increasing concern about the environment. The need to generate pollution-free energy has triggered considerable effort toward renewable energy (RE). RE sources such as solar, wind, flowing water and biomass offer the promise of clean and abundant energy. They do not generate any greenhouse gases and are inexhaustible. Solar Power, in particular, is especially attractive for Philippines. In the era of renewable energy, wind power and solar Energy are mostly developed and matured technology around the globe. It is converted into a more convenient alternating current (AC) power through an inverter system. [1]

mitigation techniques using active and passive filters [3]. Jain and Sing estimated harmonics in modern power systems narrowing down key issues and challenges [4].

A paper presented by Adel M. Sharaff, Michael E. Fisher a novel optimization design technique for power system shunt filters to ensure harmonic reduction and noise mitigation on the electrical utility grid. The proposed filter design is based on the minimization of a composite objective function depicting the three main filter objectives of minimum harmonic current penetration into the electric grid system, maximum current absorption by the harmonic filter and minimum harmonic voltage distortion at points of common coupling.

Theory for the Design of C-type Filter by Yao XIAO, Jie ZHAO, Shijie MAO Based on the theoretical analysis, the paper introduces an algorithm for calculating the parameters of C-type filter that has not been published before. Firstly, the relationships of all parameters are established and discussed. Then, Parameters with least cost of the filter are also derived. Finally, the method is testified by the parameters of C-type filters having been used in some HVDC projects. Young-Sik Cho and Hanju Cha present how to select tuning factor and quality factor in designing of a single-tuned passive harmonic filter. Tuning factor and quality factor must be considered before a decision of filter parameters(R, L and C). Rampant rise in population, energy demand, economic growth and emissions have popularized renewable energy sources [6-7]. Flow of currents in longer HVDC and HVAC lines and overloaded distribution transformers cause line losses [8].

Congratulations!

BEST DISSERTATION PAPER

During 3rd colloquium presentation at John B. Lacson Maritime Foundation Inc. Ilo-ilo city





The best practice of the CME faculty and staff is their consistent active participation in write shops and workshops, demonstrating a strong eagerness to enhance their knowledge in research and extension. This commitment helps to continually improve their skills and contributes to the overall development of the department's research capabilities and community service initiatives.

Writeshop on Crafting Effective Research Proposal Incorporating Futures Thinking
November Nov. 13 – 15, 2023
Grand Astoria Hotel, ZC

Sector Involved

ZSCMST Teaching and Non-Teaching staff

No. of Participants from HEIs:

56-ZSCMST Teaching and Non-Teaching staff

No. of Participants from Partners:



CME Onboard Meeting

AVR, ZSCMST, ZC
January 23, 2023

Sector Involved

7 - ZSCMST – RIEO Personnel/
Faculty/Staff
23 – CME Faculty/Staff

No. of Participants from HEIs:

7 - ZSCMST – RIEO Personnel/
Faculty/Staff
23 – CME Faculty/Staff

No. of Participants from Partners:





A collage of photos from a seminar. The main photo shows a group of people standing in front of a banner that reads "TECHNOLOGY PROMOTION MENTORSHIP SERIES ECHO SEMINAR". Below the main photo are several smaller photos showing individuals presenting at a podium. To the right is a logo for "3iS". At the bottom, there are social media icons for Facebook and Email, with the text "Zscmst IPTBM" and "tic_iptbm@zscmst.edu.ph".



[Zscmst IPTBM](#)

tic_iptbm@zscmst.edu.ph