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EMILIO AGUINALDO
iMRC
SINCE 2021
COLLEGE CAVITE

EMILIO AGUINALDO COLLEGE CAVITE
3RD INTERNATIONAL MULTIDISCIPLINARY RESEARCH CONFERENCE

THEME:
Uniting Multidisciplinary Research on Excellence, Service and Virtue Towards Sustainable Innovation and Internationalization

July 3-4, 2023
HYBRID CONFERENCE
EACC Lecture Halls

CONFERENCE PROCEEDINGS

EACCIMRC 2023
CONFERENCE PROCEEDINGS

EMILIO
AGUINALDO
COLLEGE
CAVITE

ABOUT THE CONFERENCE

THEME

Uniting Multidisciplinary Research on Excellence, Service and Virtue Towards Sustainable Innovation and Internationalization

OBJECTIVES

○ **To provide a platform for researchers to disseminate their research findings to a wider audience.**

○ **To establish connections and linkages with other researchers of various institutions.**

○ **To set access to the knowledge of global research experts.**

○ **To benchmark on the research niches of international academic communities.**

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Message from the School President

DR. JOSE PAULO E. CAMPOS
PRESIDENT,
EMILIO AGUINALDO COLLEGE

In behalf of Emilio Aguinaldo College in Cavite, I would like to first, thank the organizers led by the Conference Chair, our Research Director, Dr. Brandon Sibbaluca and our Vice President for Academic Affairs, Dr. Rebecca Miranda. I would also like to thank our guest researchers who are presenting their research interests in their various fields. You come from different institutions beyond the Philippines. Three from Philippine Institutions, including one from our own Emilio Aguinaldo College, one from Taiwan, one from Japan, and one from Zurich, Switzerland. I would like to thank you all for sharing your researches with us here in the Philippines.

We are at a time when there is increasing mistrust among blocks of countries, and sadly research may be one of the first casualties of these free flow of ideas and exchange. This conference tries to keep the flame of research and knowledge-sharing alive amongst the institutions and I congratulate all of you. We look forward to a very fruitful exchange presenting of researches and exchange of ideas that will hopefully stimulate more inquiry, more researches and expand human understanding for the benefit of all of us and our posterity in the future.

Thank you everyone. Again, I congratulate the organizers and the participants of this International Research Multidisciplinary Research Conference.

VIRTUE ★ EXCELLENCE ★ SERVICE

Message from the Vice President for Academic Affairs

DR. REBECCA D. MIRANDA
VICE PRESIDENT FOR ACADEMIC AFFAIRS, EMILIO AGUINALDO COLLEGE CAVITE

Warmest Emilian Greetings!

The 3rd Emilio Aguinaldo College Cavite International Multidisciplinary Research Conference (EACC IMRC) is part of a tradition. In a hybrid form, it sets access to the knowledge of global research experts. Moreover, it provides a platform for researchers to disseminate their findings to a wider audience. Since it engages resource speakers and participants from around the globe, it becomes a means for connections and linkages with other researchers from various institutions and paves the way as well for benchmarking.

Tapping researchers to present practices, discoveries, and innovations in various disciplines is an enormous effort of the institutions. It is a way to contribute to the very purpose of research which is to systematically investigate and gather information on a particular topic or issue, with the aim of answering questions, solving problems, or advancing knowledge.

Congratulations to the organizers of the 3rd International Multidisciplinary Research Conference! A toast to our 50 years of Virtue, Excellence, and Service!

Mabuhay!

DR. BRANDON G. SIBBALUCA
DIRECTOR, RESEARCH AND DEVELOPMENT OFFICE, AND THE CONFERENCE CHAIRPERSON

Conference Message

Fundamentally, the idea of uniting multidisciplinary research on excellence, service, and virtue represents a paradigm shift in the way we approach innovation and global collaboration. It emphasizes the need to transcend disciplinary boundaries and integrate various fields of knowledge to foster sustainable development and international cooperation. By combining excellence, service, and virtue, we can create a framework that not only drives innovation but also ensures its positive impact on society.

At the core of our endeavor lies the pursuit of excellence. Excellence is not merely about achieving personal success or advancing individual careers. It is about pushing the boundaries of knowledge, surpassing previous achievements, and continually striving for improvement. By fostering a culture of excellence across disciplines, we can elevate our collective understanding and drive forward the frontiers of innovation and discovery.

However, excellence alone is not enough. It must be coupled with a sense of service, a dedication to the betterment of society and the welfare of humanity. As researchers and scholars, we bear a profound responsibility to leverage our expertise for the greater good. Through our work, we have the power to positively impact communities, promote social justice, and improve the lives of people around the globe. By embracing service as an integral part of our research endeavors, we can ensure that our efforts align with the values and needs of society.

Furthermore, our pursuit of sustainable innovation must be underpinned by virtue. Virtue encompasses a set of ethical principles and values that guide our actions, ensuring they are grounded in integrity, empathy, and compassion. In a world where technology and scientific advancements are advancing at an unprecedented pace, it is essential to remember that innovation must be harnessed for the betterment of humanity. By infusing our research with virtuous intentions and ethical considerations, we can prevent the misuse or unintended consequences of our discoveries and technologies.

In today's more interconnected and worldwide society, internationalization has a tremendous impact on the trajectory of research and innovation. Working together and exchanging knowledge across boundaries and cultures allows us to draw on the collective wisdom of various points of view. It enables us to draw on global knowledge and resources, better address global issues, and gain from one another's experiences. By encouraging internationalization, we can unleash the potential for paradigm-shifting discoveries and create a more varied and productive global research community.

Our distinguished speakers from both here and abroad will contribute to this conversation. With the variety of conference topics that are in store for you over the next two days, I might sum up by saying that the application of multidisciplinary research on excellence, service, and virtue to sustainable innovation and internationalization holds great promise for the future of the world. We can foster collaborative creativity, address global concerns, and create a prosperous and responsible future through the adoption of this strategy.

Thank you and let us embark on this transformative journey together!

DEAN GLENDA S. OGERIO
THE SCHOOL DEAN OF THE SCHOOL OF PHYSICAL THERAPY, AND THE CONFERENCE CO-CHAIR

Conference Message

Warmest Emilian greetings to the organizers, participants, and distinguished guests!

I would like to welcome all of you to this important event. We are gathered in this conference to share our research, ideas, and experiences in order to advance our respective fields.

I am honored to be one of the co-chairpersons of this international research conference on "Uniting Multidisciplinary Research on Excellence, Service, and Virtue towards Sustainable Innovation and Internationalization."

The theme of this conference is particularly timely. In today's world, we are facing many challenges both locally and globally. These challenges require us to think creatively and to find new ways to solve problems. I believe that multidisciplinary research is essential in addressing these challenges. By bringing together researchers from different disciplines, we can gain a more comprehensive understanding of the problems we face and develop more effective solutions. I am excited to see the presentations and discussions that will take place at this conference.

I am also looking forward to meeting and networking with the attendees from various institutions. I believe that this conference will be a valuable opportunity for us to learn from each other and to collaborate on future research projects.

Excellence, service, and virtue are also essential to our work as professionals. We must strive to provide the highest quality of service to our clients, and we must do so with compassion and integrity.

Lastly, I would like to thank the organizing committee for their hard work in making this event possible. I am confident that this conference will be a success because of everyone's efforts and talents.

Thank you for attending this conference. I look forward to working with you all.

MR. ERNESTO U. GUILLERMO, JR.
THE SCHOOL PRINCIPAL OF SENIOR HIGH SCHOOL, AND THE CONFERENCE CO-CHAIR

Conference Message

Researches, which are scientifically, done generate knew knowledge which may become the foundations of innovation and inventiveness, meaningful progress, and sustainable development.

We know that there are thousands of researches being done in the country and everywhere else in the world. Results are oftentimes conveyed only within the academic walls of educational institutions where the researchers are affiliated with.

Our **3rd EACC International Multidisciplinary Research Conference**, with the theme *"Uniting Multidisciplinary Research on Excellence, Service, and Virtue Towards Sustainable Innovation and Internationalization"*, provides an avenue for some of these researches to be presented to a wider audience. Thanks to those who responded to our call for them to participate in this conference. For the third time, Emilio Aguinaldo College – Cavite spearheads this gathering of scientific minds.

Thank you to the generous speakers and resource persons for their shared expertise in research.

Congratulations to all the organizers and supporters, participants, and presenters!

The chance to present one's research in an international gathering is already an honor. To be recognized as among the best is the icing on the cake.

May this conference bring out the best in everyone.

Virtue. Excellence. Service.

CONFERENCE CHAIR'S BIONOTE

Dr. Brandon G. Sibbaluca is a research champion, a licensed professional teacher, a certified Microsoft Innovative Educator Expert, and a professional computer engineer who is presently the Director of the Research and Development Office at the Emilio Aguinaldo College, obtained his Bachelor's degree in Computer Engineering at the Mapua University - Manila; Master's degree in Computer Engineering at the Cavite State University – Indang; Master's degree in Information Technology with specialization in Managing Information Systems at the Polytechnic University of the Philippines - Manila; Master's degree in Educational Administration at the Philippine Christian University - Manila; and Doctor of Philosophy in Technology Education with high distinction (Magna Cum Laude) at the Rizal Technological University - Mandaluyong. . He is now a candidate student at the Batangas State University – The National Engineering University taking his second PhD degree in Engineering. He has also successfully completed with honors a project-centered course on the Introduction to Individual Skills Management from the State University of New York, United States of America.

After a short stint in the field of computer programming at Goodyear Philippines, Inc., he began teaching mathematics and science courses at the International Electronics and Technical Institute, Inc. and had an opportunity to have a part-time work as a graduate school lecturer handling statistics and computer productivity courses at the Philippine Christian University - Manila.

Dr. Brandon got invited also to teach information technology and computer engineering courses in different reputable institutions like Jose Rizal University – Mandaluyong and Technological Institute of the Philippines – Quezon City. Years after, he was hired as faculty member at the STI College Caloocan and became the IT department head and eventually as the college dean. As a recipient of the STI's "Faculty of the Year" award, he got promoted by the President of the STI Head Office as the Research Head of the IT and Engineering Programs who is in-charge in the design and development of the curricula, courseware, examinations, and other academic-related materials used by the entire network. His research activities continued when he was absorbed by Emilio Aguinaldo College – Cavite as the director for the research and development office of the institution.

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His research interests are in Neural Networks, Deep Learning, Data Analytics, Internet of Things, Database Administration, Project Management Information Systems, E-Learning, and Outcomes-Based Education. His professional and scientific activity comprises two manuals; seven papers published in international scientific journals; eight papers published in national scientific journals; two international conference chairmanships; two memberships in national research councils; two international research affiliations; and three international awards such as core skills professional's exemplar by the British Council and Luminary Excellence in Research Awardee as outstanding researcher and outstanding research adviser. Aside from these, he continuously receives research awards, such as having the Best Papers, Best Abstracts, and Best Paper Presenters award in various International Conferences. His articles have reached more than 200 citations and counting in Scopus, Semantic Scholar, and Google Scholar with H-index and I-index of 5 for both scientific research databases that makes his name included in the top 2,000 scientists in the Philippines in the recent Alper-Doger Scientific Index, an international ranking and analysis system based on the scientific performance and the added value of the scientific productivity of individual scientists. For him, a mentor should also make the course academically challenging and should present the material as clearly and comprehensively as possible to inspire professional confidence and respect from learners and colleagues. He believes that a good mentor should stimulate interest in the subject taught, critical thinking on the part of the students, and adopt design thinking in research and development.

Day 1 Speakers

DR. MANUEL B. GARCIA
DIRECTOR, EDUCATIONAL INNOVATION AND TECHNOLOGY HUB, FEU INSTITUE OF TECHNOLOGY, PHILIPPINES

"Breaking Boundaries in Cross-Disciplinary and International Research Collaboration Toward Sustainable Innovation and Internationalization"

DR. MICHAEL P. SY
SENIOR RESEARCHER, INSTITUTE OF OCCUPATIONAL THERAPY, ZURICH UNIVERSITY OF APPLIED SCIENCES, SWITZERLAND

"Designing Practices and Education for Interprofessional Collaboration"

DR. ALLEN MING-LUN HSU
DISTINGUISHED PROFESSOR, SCHOOL OF DENTISTRY, NATIONAL YANG-MING UNIVERSITY, TAIWAN

"Best Research Practices in Promoting Innovation and Internationalization: A University Experience"

DR. MARY GRACE B. DACUMA
RESEARCHER, MOLECULAR EPIDEMIOLOGY, INFECTIOUS AND TROPICAL DISEASES ANIMAL BIOLOGY DIVISION, INSTITUTE OF BIOLOGICAL SCIENCES, UNIVERSITY OF THE PHILIPPINES, LOS BAÑOS, LAGUNA, PHILIPPINES

"The Challenges and Opportunities of Cross-cultural Research"

Day 2 Speakers

DR. SUPACHAI A. BASIT
DEAN, SCHOOL OF MEDICAL TECHNOLOGY
EMILIO AGUINALDO COLLEGE CAVITE, PHILIPPINES

"Technology-Based Writing and Presentation Tools for Research"

PROF. LEE H. FLAKE
DEPARTMENT HEAD, FOREIGN LANGUAGES DEPARTMENT
NAGASAKI WESLEYAN UNIVERSITY, JAPAN

"Empowering the Present Generation of Researchers"

DR. RHOWEL M. DELLOSA
CENTER HEAD, DATA ANALYTICS
LINGAYEN, PANGASINAN, PHILIPPINES

"Opportunities for Research Publication"

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KEYNOTE SPEAKER'S BIONOTE

Manuel B. Garcia is a professor of information technology and the founding director of the Educational Innovation and Technology Hub (EdITH) at FEU Institute of Technology, Manila, Philippines. He is a graduate of Doctor of Information Technology from the University of the East and is presently a student of Doctor of Philosophy in Education at the University of the Philippines. His interdisciplinary research interest includes topics that, individually or collectively, cover the disciplines of education and information technology. He is a licensed professional teacher and a proud member of the National Research Council of the Philippines – an attached agency to the country's Department of Science and Technology (DOST-NRCP).

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3rd EACC International Multidisciplinary Research Conference

PROGRAM OF ACTIVITIES

DAY 1 (JULY 3, 2023)

Schedule: 8:00 AM – 5:00 PM
Venue: Lecture Hall 2, Institute of the Law and Justice, Emilio Aguinaldo College Cavite
Google Meet Link: https://meet.google.com/wfm-rvrn-oyr

SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
8:00 – 8:15 AM	Registration	3rd EACCIMRC Registration Committee	15 minutes
8:15 – 8:25 AM	Program Preliminaries ● Invocation ● Philippine National Anthem ● EAC Hymn	EAC Chorale	10 minutes
8:25 – 8:40 AM	Conference Message Topic: **Overview of the Conference Topics and Expectations**	**Dr. Brandon G. Sibbaluca** 3rd EACCIMRC Conference Chair and Director, Research and Development Office, EAC Cavite, Philippines	15 minutes
8:40 – 8:45 AM	Welcome and Opening Remarks	**Dr. Jose Paulo E. Campos** President, EAC	5 minutes
8:45 – 8:50 AM	Introduction of the Keynote Speaker	**Dr. Brandon G. Sibbaluca** 3rd EACCIMRC Conference Chair and Director of the Research and Development Office, EAC Cavite, Philippines	5 minutes
8:50 – 9:50 AM	Message of the Keynote Speaker (onsite) Topic: **Breaking Boundaries in Cross-Disciplinary and International Research Collaboration Toward Sustainable Innovation and Internationalization**	**Dr. Manuel B. Garcia** Director, Educational Innovation and Technology Hub, FEU Institute of Technology, Manila, Philippines	1 hour

SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
9:50 – 10:05 AM	Health Break		15 minutes
10:05 – 10:10 AM	Introduction of the 1st Speaker	**Dean Glenda S. Ogerio** 3rd EACCIMRC Conference Co-chair and Dean, School of Physical Therapy, EAC Cavite, Philippines	5 minutes
10:10 – 10:40 AM	Topic: **Designing Practices and Education for Interprofessional Collaboration**	**Dr. Michael P. Sy** Senior Researcher, Institute of Occupational Therapy, Zurich University of Applied Sciences, Switzerland	30 minutes
10:40 – 10:45 AM	Introduction of the 2nd Speaker	**Dr. Veronica S. Garcia** Dean, School of Dental Medicine, EAC Cavite, Philippines	5 minutes
10:45 – 11:15 AM	Topic: **Best Research Practices in Promoting Innovation and Internationalization: A University Experience**	**Dr. Allen Ming-Lun Hsu** Distinguished Professor, School of Dentistry, National Yang-Ming University, Taiwan	30 minutes
11:15 – 11:20 AM	Introduction of the 3rd Speaker	**Dr. Brandon G. Sibbaluca** 3rd EACCIMRC Conference Chair and Director, Research and Development Office, EAC Cavite, Philippines	5 minutes
11:20 – 11:50 AM	Topic: **The Challenges and Opportunities of Cross-cultural Research**	**Dr. Mary Grace B. Dacuma** Researcher, Molecular Epidemiology, Infectious and Tropical Diseases Animal Biology Division, Institute of Biological Sciences, University of the Philippines, Los Baños, Laguna, Philippines	30 minutes
11:50 – 12:10 PM	Forum & Awarding of Plaques to Day 1 Speakers	**Dr. Carl Mark B. Miniano** Dean, School of Business Administration and Accountancy, and School of Tourism and International Hospitality Management	20 minutes
12:10 – 1:10 PM	Lunch Break		1 hour
1:10 – 3:10 PM	Parallel Sessions	Assigned Session Chairs	2 hours

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SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
		and Moderators	
	Parallel Session 1:	**Dr. Jeanneath D. Velarde and Ms. Marie Christine Pasco**	
	Google Meet Link: https://meet.google.com/yss-pxej-faf		
	Venue: Lecture Hall 2		
	Category: Professionals (Onsite and Online)		
	Session Tracks:		
	- Natural and Physical Sciences, Health Care and Technology - Education, Humanities, and Social Sciences - Computing, Automation, Engineering, and Technology - Accountancy, Business, and Management		
	Parallel Session 2:	**Dr. Veronica S. Garcia and Ms. Arlene M. Leron**	
	Google Meet Link: https://meet.google.com/pya-vrtq-tkx		
	Venue: Lecture Hall 1		
	Category: Students (Onsite)		
	Session Tracks:		
	- Natural and Physical Sciences, Health Care and Technology - Education, Humanities, and Social Sciences - Computing, Automation, Engineering, and Technology - Accountancy, Business, and Management		

SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
	Parallel Session 3: Google Meet Link: https://meet.google.com/zvm-bdhu-pfk Venue: Room 7207 Category: Students (Online) Session Tracks: ● Natural and Physical Sciences, Health Care and Technology ● Education, Humanities, and Social Sciences ● **Parallel Session 4:** Google Meet Link: https://meet.google.com/cfy-poqs-ksw Venue: Room 7208 Category: Students (Online) Session Tracks: ● Computing, Automation, Engineering, and Technology	**Dr. Jessica F. Torre and Ms. April Rose D. Antonio** **Dr. Regene G. Hernandez, and Mr. Cesario C. Sanchez, Jr.**	
3:10 – 3:25 PM	Health Break		15 minutes
3:25 – 4:55 PM	Continuation of Parallel Sessions	Assigned Session Chairs and Moderators	1.5 hour
4:55 – 5:00 PM	Announcements/Reminders and Closing Prayer *	**Dr. Veronica S. Garcia** Dean, School of Dental Medicine	5 minutes
DR. CARL MARK B. MINIANO Master of Ceremonies			

*To be held at Lecture Hall 2, Institute of the Law and Justice Building EAC Cavite,Philippines

VIRTUE ★ EXCELLENCE ★ SERVICE

DAY 2 (JULY 4, 2023)

Schedule: 8:00 AM – 3:00 PM
Venue: Lecture Hall 2, Institute of the Law and Justice, Emilio Aguinaldo College Cavite
Google Meet Link: https://meet.google.com/wfm-rvrn-oyr

SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
8:00 – 8:15 AM	Registration	3rd EACCIMRC Registration Committee	15 minutes
8:15 – 8:30 AM	Program Preliminaries ● Invocation ● Philippine National Anthem ● EAC Hymn	EAC Chorale	15 minutes
8:30 – 8:45 AM	Synthesis of Day 1	**Mr. Ernesto U. Guillermo, Jr.** 3rd EACCIMRC Conference Co-chair and Senior High School Principal, EAC Cavite, Philippines	15 minutes
8:45 – 8:55 AM	Intermission Number	EAC Chorale	10 minutes
8:55 – 9:00 AM	Introduction of the 4th Speaker	**Mr. Ernesto U. Guillermo, Jr.** 3rd EACCIMRC Conference Co-chair and Senior High School Principal, EAC Cavite, Philippines	5 minutes
9:00 – 9:30 AM	Topic: **Technology-Based Writing and Presentation Tools for Research**	**Dr. Supachai A. Basit** Dean, School of Medical Technology, EAC Cavite, Philippines	30 minutes
9:30– 9:35 AM	Introduction of the 5th Speaker	**Dr. Rebecca D. Miranda** Vice President for Academic Affairs, EAC Cavite, Philippines	5 minutes
9:35 – 9:55 AM	Topic: **Empowering the Present Generation of Researchers**	**Prof. Lee H. Flake** Department Head, Foreign Languages Department, Nagasaki Wesleyan University	20 minutes
9:55 – 10:00 AM	Introduction of the 6th Speaker	**Dr. Brandon G. Sibbaluca** 3rd EACCIMRC Conference Chair and Director, Research and Development Office, EAC Cavite, Philippines	5 minutes
10:00 – 10:20 AM	Topic: **Opportunities for Research Publication**	**Dr. Rhowel M. Dellosa** Center Head, Data Analytics, Pangasinan State University	20 minutes

SCHEDULE	TOPIC/ACTIVITY	RESOURCE PERSON/S	TIME ALLOTMENT
10:20 – 10:40 AM	Forum & Awarding of Plaques to Day 2 Speakers	**Dr. Carl Mark B. Miniano** Dean, School of Business Administration and Accountancy, and School of Tourism and International Hospitality Management	20 minutes
10:40 – 11:00 AM	Health Break		20 minutes
11:00 – 11:50 AM	Awarding Ceremonies (Chairs & Committee Members) - Best Poster 1st,2nd, and 3rd Placers - Best Abstract 1st,2nd, and 3rd Placers per category - Best Presenter 1st,2nd, and 3rd Placers per category - Best Paper 1st,2nd, and 3rd Placers per category and overall	**Dean Glenda S. Ogerio** 3rd EACCIMRC Conference Co-chair and Dean, School of Physical Therapy, EAC Cavite, Philippines	50 minutes
11:50 – 11:55 AM	Closing Remarks	**Dr. Rebecca D. Miranda** Vice President for Academic Affairs, EAC Cavite, Philippines	5 minutes
11:55 – 12NN	Closing Prayer	**Dr. Alma O. Viloria** Director, Center for Academic Assessment and Analytics and Online Learning-Teaching Department and Head, General Education Department	5 minutes
12:00 – 1:00 PM	Lunch Break		1 hour
1:00 – 1:30 PM	Conference Evaluation	3rd EACCIMRC Organizing Committee	30 minutes
1:30 – 3:00 PM	Exhibits and Networking	**Ms. Iaris L. Alagon** Director, Student Admissions Office	1.5 hours
DR. CARL MARK B. MINIANO Master of Ceremonies			

VIRTUE ★ EXCELLENCE ★ SERVICE

PARALLEL SESSIONS

PARALLEL SESSION	SESSION TRACK	SESSION CHAIR AND MODERATOR	VENUE
Parallel Session 1: Professionals (Onsite and Online)	● Natural And Physical Sciences, Health Care and Technology ● Education, Humanities and Social Sciences ● Computing, Automation, Engineering, and Technology ● Accountancy, Business and Management	**Dr. Jeanneath D. Velarde and Ms. Marie Cristine F. Pasco**	Lecture Hall 2 https://meet.google.com/yss-pxej-faf
Parallel Session 2: Students (Onsite)	● Natural And Physical Sciences, Health Care and Technology ● Education, Humanities and Social Sciences ● Computing, Automation, Engineering, and Technology ● Accountancy, Business and Management	**Dr. Veronica S. Garcia and Ms. Arlene M. Leron**	Lecture Hall 1 https://meet.google.com/pya-vrtq-tkx
Parallel Session 3: Students (Online)	● Natural And Physical Sciences, Health Care and Technology ● Education, Humanities and Social Sciences	**Dr. Jessica F. Torre and Ms. April Rose D. Antonio**	Room 7207 https://meet.google.com/zvm-bdhu-pfk
Parallel Session 4: Students (Online)	● Computing, Automation, Engineering, and Technology	**Dr. Regene G. Hernandez, and Mr. Cesario C. Sanchez, Jr.**	Room 7208 https://meet.google.com/cfy-poqs-ksw

PARALLEL SESSION 1 SCHEDULE
PROFESSIONAL CATEGORY

(Natural And Physical Sciences, Health Care and Technology,
Education, Humanities and Social Sciences,
Computing, Automation, Engineering, and Technology,
and **Accountancy, Business and Management**)

TIME	RESEARCH TITLE	AUTHOR/S
1:10 – 1:25 PM	Meta-analysis on the diversity of *Hymenoptera* families present in cacao-growing countries	**Bravo, N. L.**
1:25 – 1:40PM	Housework-based exercise versus conventional exercise on health-related fitness of adolescent learners	**Tanucan, J. C.M.**, Garcia, M. A., Bojos, M. T.
1:40 – 1:55 PM	Socio-demographic determinants of Filipino school leaders' digital leadership	Tanucan, J. C. M., Negrido, C V., **Uytico, B. J.,** & Wider, W
1:55 – 2:10 PM	Rote learning and critical thinking of students: Prospects for reflective learning strategies	**Cheng, Y.**
2:10 – 2:25 PM	Student perceptions on the scholarships services at Emilio Aguinaldo College Cavite, Philippines	**Mack, K.**
2:25 – 2:40 PM	College student's cognitive absorption, cyberloafing, and psychological capital towards academic procrastination: An empirical perspective from Capiz Province	**Bombaes, A.,** Cabig, A. A., Leron, A. M., Honez, S., Cada, L. R., & Laguna, M. J.
2:40 – 2:55 PM	Human rights-based policing: capability-building, knowledge, practices and challenges of Filipino policemen in Cavite, Philippines	**Ybañez, A. D., Masagca, S. A. M,** & Masagca, M. J. H.
2:55 – 3:10 PM	Pagbabago (Recovery): Deconstructing social alienation from the narratives of meanings and life experiences of rehabilitated illegal drug dependents through the lens of restorative justice	**Gamo, M., & Musni, R. A.**
3:10 – 3:25 PM	Health Break	
3:25 – 3:40 PM	Level of awareness, effectiveness, and employee engagement of non-teaching personnel in relation to performance evaluation	**Remollo-Mack, M.**
3:40 – 3:55 PM	Environmental awareness thru green marketing and the consumption behavior of a selected city: Towards an improved marketing model	**Estampador, J. R.**, Baysa, G., & Cardones, E.
3:55 – 4:10 PM	Designing a timetabling management information system in one of the Senior High Schools in Carmona, Cavite	**Fernandez, A. D.**
4:10 – 4:25 PM	Development and implementation of document management system for Ilocos Sur Polytechnic State College, Tagudin Campus	Angala, D. T., Casugay, B. C. O., Estillore, H. M., Q., Lebantino, J. B., Maracha, S. O., Valdez, J. E. C., **Villanueva, G. R.**

TIME	RESEARCH TITLE	AUTHOR/S
4:25 – 4:40 PM	Development of online customer retention approaches of optimization of a car insurance company using behavioral analytics	**Sabili, M. A., Friginal, F. F. S., & Obamos, E. L.**
4:40 – 4:55 PM	Factors and strategies affecting voting behavior of registered voters in the municipality of Silang, Cavite	**Alcazar, M. D. P.**
4:55 – 5:10 PM	An evaluation of the Bureau of Customs – Port of NAIA revenue collection performance as basis for key performance success framework	**Valenzuela, A.**

PARALLEL SESSION 2 SCHEDULE STUDENTS CATEGORY

(Natural And Physical Sciences, Health Care and Technology, Education, Humanities and Social Sciences, Computing, Automation, Engineering, and Technology, and Accountancy, Business and Management)

TIME	RESEARCH TITLE	AUTHOR/S
1:10 – 1:25 PM	Grade inflation: The relationship between leisure time and academic performance of selected Grade 12 students	**Daitan, G.,** Adores, L., Baylon, A., Caday, R. M. N., Colesio, A. S., Compuesto, W. L., Curva, C. A., Diano, E., Echevarria, S. M., Eclarino, C. K., Recolcolin, S. A., & Beltran, M.
1:25 – 1:40PM	Tsismis and chismosa culture towards emotional coping strategies: A grounded theory framework	**Rio, J. U. S.**, Ballesteros, C. E. K. C., Beltran, C. M. T., Durante, J. T., Garcia, E. M. V., Rosanes, J. F. O., & Tampos, C. J., & Obrero, J. D.
1:40 – 1:55 PM	Level of English reading comprehension among selected Grade 10 students during the post-pandemic era among selected public and private schools in Imus City, Cavite for the A.Y. 2022-2023	**Samaniego, N. J.S.**, Saracanlao, L. M. J. L., Mequiota, J. R. R., Flores M. N. S., Alkuino, S. E. M., & Naelgas, E. J. V.
1:55 – 2:10 PM	Level of acceptability of banana stem and jackfruit burger patty among burger vendors in Imus City, Cavite	**Ito, I. E. V.**, Ramos, J. R., Urbano, F. P., Quillopo, A. B. M., Vallega, J. M., & Panganiban, J. R. S.
2:10 – 2:25 PM	In vitro activity of biologically synthesized silver nanoparticles by *Escherichia coli* against multidrug resistant biofilm consortium isolated from sewage	**Sudaria, M. J.**, Saylon, R. E. C., Estrada, N. C., Del Rosario, I. J. B., Posadas, R. J. A. M., Bataller, C. A. A., Dayrit, G. B., & Basit, S. A.

TIME	RESEARCH TITLE	AUTHOR/S
2:25 – 2:40 PM	Antibiogram profile of *Escherichia coli* isolated from Ylang-Ylang River stream in Cavite, Philippines	Azuela, K.L., Bagsic, M.J., **Dela Cruz, G.**, Ornedo, M.B., Samson, K., Sindol, C.M., Villanueva, D.R., Basit, S. A., Dayrit, G. B., & Yalung-Sison, A.
2:40 – 2:55 PM	Relationship of pneumonia incidence and risk of exposure to Covid-19: A cross-sectional study	Torres, R. S. L., Monzon, G. B., Silang, P. C., Martinez, Y. R. D, Apalit, N. F. C., & **Layosa, J. C.**
2:55 – 3:10 PM	Prediction mapping of leptospirosis cases in Calabarzon from 2015 to 2019	Geluz, P. P., Lacambra, K. M. S., Macario, C. D. M. V., Perdon, J. R. R.,**Villanueva, R. M. M.**
3:10 – 3:25 PM	Health Break	
3:25 – 3:40 PM	Practices of street vendors and bacteriological quality of food sauces collected within and outside an academic institution in Dasmarinas City, Cavite	Bergonio, M. T. J. T., Braga, H. S., Cinco, D. L., Enano, J. B., **Mainit, D. S.**, Sorreda, B. N., Basit, S. A., & Dayrit, G. B.
3:40 – 3:55 PM	Effectiveness of Astrazeneca, Gamaleya Sputnik Light and Sputnik V, Janssen, Moderna, Pfizer, Sinopharm, and Sinovac as Boosters against the Omicron Variant: A meta-synthesis	**Caballero, N. D.**, Acuram, A. F., Cruz, J. H. C., Pakingan, K. M. K., Pojol, L. C. C., & Dayrit, G. B.
3:55 – 4:10 PM	Assessment of the factors affecting the job satisfaction of registered medical technologists working in clinical and anatomical laboratories in the Philippines	**Rosaldo, F. N. G.**, Angala, M. S. A., Baugh, J. V. M., Bautista, Y. E. G., Dejaño, K. A., Magtibay, L. G. A., & Dayrit, G. B.
4:10 – 4:25 PM	Evaluation of Crystal Violet - D tagatose Agar as a selective media for *Streptococcus pneumoniae*	**Falsis, A. J. S.**, Butiong, E. R., Gomez, P. L., Orense, Alta G. A., Patacsil, C. M. F., & Razo, M. G. H. C.
4:25 – 4:40 PM	Antibiotic resistance of isolated foodborne pathogens present in pre-cut watermelon and pineapple in open market and supermarket	Abalos F.K., **Asuncion, M. G.**, Avelino, L.Y., Botona, A., Cuenca, M., Poniente, A.M., Santos, V., Dayrit, G., & Salcedo, D.
4:40 – 4:55 PM	Investigation of the presence of bacteria from re-used and unsanitized tourniquet for phlebotomy in tertiary hospital and free-standing laboratory	Aberca, R. M., Commandate, G., **Cupino, T. M.**, Legaspi, A. J., Morada, J. K., Morales, T. M., Paragas, E. A., Dayrit, G. B., & Silvestre, V. D.

PARALLEL SESSION 3 SCHEDULE
STUDENTS CATEGORY

(Natural And Physical Sciences, Health Care and Technology and
Education, Humanities and Social Sciences)

TIME	RESEARCH TITLE	AUTHOR/S
1:10 – 1:25 PM	Alternative dispute resolution: A key to peace and order in the barangay level	**Alvarez, C. F. W.**, Sarabia, C. A. B., Rivera, M. O., De Guzman, C. V. A., & Carriedo, L. C. D.
1:25 – 1:40PM	Social media needs and identity distress level among third year college students at Emilio Aguinaldo College – Cavite	**Acosta, R. M. T.**, Hansen, G. C., Arguelle, W. L., Delos Reyes, D. R., & Cabig, M. A. A.
1:40 – 1:55 PM	Students' self-regulated learning strategies, self-efficacy, and mathematics performance in a mobile technology-integrated classroom of selected Grade 8 learners	**Ramos, R. G. A.**, Caragay, J. A., & Apostol, G. C.
1:55 – 2:10 PM	Content and Language Integrated Learning (CLIL) as a tool in developing students' skill in writing an expository essay	**Canteras, W. M.**
2:10 – 2:25 PM	Navigating the shift from virtual learning to clinical practice: A phenomenological investigation of nursing students' transitional experiences	**San Juan, M. H. V.**, Reyes, L. G. E., Gambito, I. S., & Galapon, J. N. A.
2:25 – 2:40 PM	The peak of dawn: A parallel mixed method exploration towards promotion of family planning	**Erni, I. F. E.**, Ostria, A. J. B., Glorioso, C. D., & Ilagan, J. L. D.
2:40 – 2:55 PM	Visual narratives of sanitation practices in Barangay San Jose, Tagaytay City: A photovoice exploration	**Olores, S. J. R.**, Gabucan, P. J. E., Mata, J. M. L., Matutina, C. J. C., & Peremne, J. B.
2:55 – 3:10 PM	Assessing the readiness of Barangay San Jose to Taal Volcano unrest: A comprehensive sequential explanatory mixed method approach	Avinante, K. A. M., Bungag, E. E., Cabical, M. M. H., **Rogador, L.**, Salvo, K. G. C., & Valdez, M. E. B.
3:10 – 3:25 PM	Health Break	
3:25 – 3:40 PM	The Correlation of Vitamin D to Covid-19 Disease: Scoping review	**Irinco, M.** & Gaudang, G. G.
3:40 – 3:55 PM	The use of enhanced urine culture technique in detection of clinically isolated urine pathogens: Meta-synthesis	Baterina, S. L. P., Clarion, R. E., Dungao, C. A., Gloria, J. H. L., **Hebra, P. M. A.**, Odeña, G. E., Ramirez, G. M. L., Velante, A., & Vicedo, M. A. S.
3:55 – 4:10 PM	Knowledge, attitude, and practice on face masks and gloves of medical technologists in Cavite	Balmonte, J. J. S., Catangay, L. J. H., **Dala, C. A. L**., Estrada, R. T., Gonzales, A. D. S., Ison, E. F. G., Llamas, J. A. D., & Mendoza, J. R. R.

VIRTUE ★ EXCELLENCE ★ SERVICE

PARALLEL SESSION 4 SCHEDULE
STUDENTS CATEGORY

(**Computing, Automation, Engineering, and Technology**)

TIME	RESEARCH TITLE	AUTHOR/S
1:10 – 1:25 PM	MIONG.qs: The Ticket Queue Dispensing Robot	**Johnson, J. N., Paguinto, A. M., Quilo, N. A., Baltazar, D. E.**
1:25 – 1:40PM	MyGlucose: An online diabetes monitoring system with diabetes prediction feature using supervised classification algorithms	**Dequito, I. D. R.**, Aljoubori, S. M. V., Bernido, A. J. B., & Lacno, V. J.
1:40 – 1:55 PM	ArguAria: Real-time water quality monitoring and temperature controlled system with automatic fish feeder	Ambona, M. A. C., Magbanua, A. J. R., **Malabanan, K. D.**, & Manlapaz, J. Q. B.
1:55 – 2:10 PM	Mechanical properties of bio-based concrete with partial replacement of rice husk as fine aggregate	**Tolentino, H. G.**, Lasmarias, J. N., & Jayme, K. B.
2:10 – 2:25 PM	Lokal: A secured contact tracing application using GPS and AES-128 algorithm	Paaño, D. C. V., Patdo, V. J. T., Roxas, S. V. C., **Santos, J. L. B.**, & Teodoro, K. A. F.
2:25 – 2:40 PM	ScoutDroid: Basketball visualization for analyzing shot performance using the K-Means algorithm	**Bañez, C. M. C.**, Paglaon, J. M., Amido, L. L. I., Mallari, L. P., & Chapa, M. J.

POSTERS

(DISPLAYED AT THE EXHIBIT AREA, INSTITUTE OF THE LAW AND JUSTICE BUILDING, EAC CAVITE, PHILIPPINES)

RESEARCH TITLE	AUTHOR/S
(Web-Based Homeowner's Assistance Tool) WebHAT: Real-time progressive web application management tool for IL Giardino Residences Homeowners Association	**Baral, A. F.,** Germono, V. N., Pe Benito, A. G. B., & Rivera, Angelo A.
An online benefit-cost analysis calculator for Respecia Innovation Incorporated	**Saringan, E. M.**, Magaro, M. E., & Umali, A. D.
Students' self-regulated learning strategies, self-efficacy, and mathematics performance in a mobile technology-integrated classroom of selected Grade 8 learners	**Ramos, R. G. A.**, Caragay, J. A., & Apostol, G. C.
Buwan: LAN-based database management system	Barles, S. A. P., **Bolivar, P. A. F**., Mendoza, J. J. R., & Salazar, R. M.
Mapa-Emiliano: Web-Based Interactive School Map	Baguioro, J. P., Del Remedio, J. M., **Dionela, A. C.**, & Simeon, J. M.

VIRTUE ★ EXCELLENCE ★ SERVICE

RESEARCH TITLE	AUTHOR/S
ROBOSOW: The Multi-Functional Seed Planting Robot	Canillo, D. M., Ocampo, M. B. B., San Juan, M. F. P., & **Ramos, J. M. A.**

BEST PAPER CRITERIA

Only those who submitted their full paper on or before June 16, 2023, will be qualified for evaluation.

Contribution to New Knowledge and to Society	25%
Soundness of Contents	55%
Scientific Writing and Grammar	10%
Adherence to the Conference Theme	10%
TOTAL	100%

BEST ABSTRACT CRITERIA

Contribution to New Knowledge and to Society	25%
Soundness of Contents	55%
Scientific Writing and Grammar	10%
Compliance to Format	10%
TOTAL	100%

BEST PAPER PRESENTER CRITERIA

Contribution to New Knowledge and to Society	15%
Soundness of Contents	35%
Effectiveness of Presentation	35%
Ability to Answer Questions	10%
Compliance to Presentation Format and Duration	5%
TOTAL	100%

BEST POSTER CRITERIA

Content	30%
Visual Appeal	40%
Organization/Thoughts	20%
Like and Heart Reactions	10%
TOTAL	100%

ABSTRACTS
PROFESSIONALS

VIRTUE ★ EXCELLENCE ★ SERVICE

CODE:	EACCIMRC-3-1
TITLE: **College Student's Cognitive Absorption, Cyberloafing, Psychological Capital and Academic Procrastination: An Empirical Perspective from Capiz Province**	

AUTHOR/S: Ace N. Bombaes, Archie A. Cabig, Arlene M. Leron, Shirley Honez, Leah Rose Cada, Mary Jane Laguna, Leah Rose Cada

AFFILIATION/INSTITUTION/S: General Education Department, Emilio Aguinaldo College-Cavite ,Dasmariñas City, Cavite

ABSTRACT

The study investigated and explore the impacts of cognitive absorption, cyberloafing, and psychological capital on college students' academic procrastination using a survey. There were 381 participants from different colleges in Capiz who were randomly selected. Adopted and self-made instruments were validated by the panel of experts and underwent pilot testing with 30 students who were not included as participants in the study. The independent variables in this study were cognitive absorption, cyberloafing, and psychological capital, while the dependent variable was academic procrastination. The instruments were tested with the aid of SPSS using the Analysis of Variance (ANOVA). Findings show that through cognitive absorption, students who become addicted to social media platforms become less attentive to, less conscious of, and unaware of potential negative consequences because they are cognitively absorbed; the effects of cyberloafing can be positively and negatively perceived depending on one's intention and can affect the individual's learning capacity resulting from participatory decision-making and interaction with the external environment; psychological assets can reduce and decrease risk and the impacts of academic procrastination, thus preventing students from delaying and putting off their academic tasks.

KEYWORDS: *Cognitive Absorption, Cyberloafing, Psychological Capital, Academic Procrastination*

CODE:	EACCIMRC-3-3
TITLE: **Comparative Evaluation of the Bureau of Customs – Port of NAIA Revenue Management Indicators: Basis For Key Performance Success Framework**	
AUTHOR/S: Adrian Montarin Valenzuela	
AFFILIATION/INSTITUTION/S: School of Law, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite	

ABSTRACT

Government revenue collection performance has moved the attention of many public officials for decades. However, there is still some arguments about on how tax revenue performance can be measured, what is the correct distribution of targets, and how the agencies analyze maximizing revenue collection. Since the commencement of setting the individual revenue targets for different collection districts, the Port of NAIA has failed to meet the assigned target. This research presents some concerns urgently needed to be resolved regarding the analysis of the Port of NAIA Revenue Performance based on the deviations from the revenue target set for the port by analyzing the behavioral trends in the past four years. This will involve the determining of the parameters used in evaluation and assessment of the correct revenue collection target for the port as key performance indicators considering the existence of the non-revenue volume of imports processed and released by the port which hereafter classified as "Foregone Revenue" to determine the impact of this type of imports in the revenue collection target setting for the port.

The researcher utilized mixed methodology in this research using descriptive statistics and inferential statistics which generally falls under a quantitative research method and the qualitative method of research. This specifically depicts a case study on the Bureau of Customs to attain the purposes of the study. The methods are viable for the present research since it is status trend and deals with prevailing characteristics of a group of people specifically on the top and middle management level and their level of satisfaction. The factors affecting levels of satisfaction are the dependent variables, person-related variables while determinants of business performance are the independent variables.

Most of the respondent's age are above 46 years of age, male, postgraduate, and who spent 16-20 years in the service, this means that most the respondents were adult men with master's degree. The assessment of the respondents in Port of NAIA's Scorecard in terms of Impact in Fiscal Strength, impact Border Security, Strategic Goal, Core Process Scorecard and Support Process Scorecard mostly assessed "Strongly Agree", except on the aspect of Impact in Economic Growth where the results were interpreted "Disagree", which there is a room for improvement to reach the tip of success in the field business. The significant differences in the assessments of the respondents in the Port of NAIA's scorecard when grouped according to their profile are as statistically not significant when group according to Sex and Educational Attainment, statistically significant when group according to Age, Division/Office, and Length of Service. Therefore, it is evident that the respondent's assessment had divided assessment based on their profiling. Since the respondents were male, the business should think of a way to encourage women to engage in work to balance the gender existence in the field of work and the company management also should encourage their employees to uplift their

educational status or pursue post graduate degrees to become more competitive among other business. As to Length of Service, the top management should empower the next official in rank as majority of the Division Chiefs & Heads are in ageing population already and soon to avail their retirement. Further, these would open for a new business strategy on how to attain the target and objectives of the respective offices which contribute to the attainment of the organizational goals. Since most of the assessment of the respondents in Port of NAIA's Scorecard in terms of impact in Economic Growth has an average mean of 2.46 under this variable and is interpreted "disagree", it is highly recommended to make some innovation to improve and make in-depth connections on the economic growth aspect.

Respondents' assessment, in general, the Assigned Target are adequate, however, the volume and value of imports arriving on respective offices are not sufficient to achieve the individual target thus the Top Management should also assess and evaluate the type of imported goods under specific office's jurisdiction specifically the Assessment Composite Unit to determine if said commodities are sufficient to attain the assigned target considering the value and volume of imports and exports.

The study proposes an amendment of the existing Revenue Management Indicators of the Port of NAIA by adding the following measures to attain the organizational objectives of the port particularly in the improvement on the Impact on the Economic Growth, such as Value of Imports to help the port gauge the impact of the value of imported goods in relation to Fiscal Strength instead of focusing on the volume of imports alone.

Further, this would promote the proper application of methods of valuation in accordance with the Customs Modernization and Tariff Act (CMTA) to maximize revenue collection, to include the additional measures involving export goods, though minimal impact on the revenue collection, this aspect can provide a collective impact on an annual scale for the attainment of the fiscal strength in terms of revenue collection, improve measures on the Management Operational Indicators to implement and observe regular checking on the effectiveness of its personnel through a uniform scorecard across all personnel aligned with the Proposed Management Indicators of the Port, observe the proper List of Taskings/ Areas of Concerns based on the unique contribution of the offices on the Revenue Management Indicators for the proper monitoring of each measure to ensure conformity with the overall objectives of the port, designation of NAIA's KPI Monitoring Team or Excellence Committee that will monitor the KPI of each office and to determine the challenges and weak points that can be considered in the next amendment of the Revenue Management Indicators. This study also suggests creating an ad hoc committee attached to the Excellence Committee that will be responsible for the development administration, monitoring and evaluation of the awards and incentives system of the Port and, to revisit the Work Procedure Plans of each office and align with the Proposed Revenue Management Indicators of the port.

CODE:	EACCIMRC-3-5

TITLE: **Factors and Strategies affecting Voting Behavior of Registered Voters in the Municipality of Silang, Cavite**

AUTHOR/S: Marc Darish P. Alcazar

AFFILIATION/INSTITUTION/S: College of Arts and Sciences, Cavite State University – Don Severino De las Alas Campus, Indang, Cavite

ABSTRACT

In Article V, Section 1 of the 1987 Philippine Constitution, it is stated that suffrage may be exercised by all citizens of the Philippines who are not otherwise disqualified by law. For that constitutional provision, suffrage is the right to vote and to be voted in public elections, both local and national, in certain circumstances.

In the Philippines, voters are attracted by sociocultural issues. Elections are usually regarded as the embodiment of public will and the manifestation of the people's sovereign authority in contemporary democratic countries. In a democratic society, it is necessary to understand the patterns of how people vote for political candidates and how voting behavior affects them due to several factors and strategies that are given in every election.

In this study, the factors and strategies affecting the voting behavior of registered voters in the municipality of Silang, Cavite, were discussed. Specifically, it also sought answers to the following questions from the respondents: (1) Determine their demographic profile; (2) identify the factors affecting their voting behavior; (3) determine the election campaign strategies used by a political candidate to affect the voting behavior of the respondents; and (4) determine if there are significant relationships between factors, election campaign strategies, and voting behavior.

Moreover, it understands how given factors such as educational background, family affiliation, political party affiliation, and platforms with strategies such as campaign jingles, social media advertisements, and giving merchandise like a jacket, cap, bracelet, fan, and others affect the choice of the voter.

Keywords: *Election, Platforms, Political Party Affiliation, Family Affiliation, Campaign Strategies*

CODE:	EACCIMRC-3-9

TITLE: **A Web-Based System for Customer Retention Strategies Optimization of A Car Insurance Company Using Cohort and Churn Analysis**

AUTHOR/S: Mark Anthony P. Sabili, Ph.D., Frances Frangelico S. Friginal, MIT, Engr. Elizier O. Obamos, ME CoE

AFFILIATION/INSTITUTION/S: School of Engineering and Technology, Emilio Aguinaldo College - Manila

ABSTRACT

Customer retention is a key metric in the assessment of customer experience in a business industry. It is considered as one of the most important success factors for auto/car insurance companies. According to Livingston (2020), the auto insurance industry has an average of 22 % customer churn every year. Insurance companies are actively investing in customer acquisition rather than attempting to retain existing clients, despite the fact that they lose approximately 16 % of their customer base annually (IBM Institute of Business Value, 2021).

This research project is a Web-Based System for Optimizing a Car Insurance Company's Customer Retention Strategies Using Cohort and Churn Analysis. Cohort Analysis is used to segment groups of customers based on their date of insurance and track their renewal behavior over time. Churn Analysis is used to create a model that predicts the likelihood of a customer leaving. The car insurance dataset was used to train a random forest model with an accuracy rate of 87.69%. For testing and evaluation, the ISO/IEC 25010 or also known as Systems and Software Quality Requirements and Evaluation (SQuaRE) model was utilized to survey respondents and came out with an overall mean category at 4.58 and a rating of SA (Strongly Agreed). Thus, it is concluded that the system has passed the Systems and Software Quality Requirements and Evaluation.

The system has demonstrated that the objectives were fulfilled, and users were satisfied with the overall purpose of the system. As a result, the car insurance company will benefit from the system by optimizing their customer retention strategies by examining various data visualizations and thus generating data-driven insights.

Keywords: *car insurance, churn analysis, cohort analysis, customer retention, predictive analytics*

CODE:	EACCIMRC-3-41

TITLE: Meta-Analysis on the Diversity of Hymenoptera Families Present in Cacao-Growing Countries

AUTHOR/S: Bravo, Nico L. LPT

AFFILIATION/INSTITUTION/S: Biology Department, College of Science, De La Salle University – Manila

ABSTRACT

Theobroma cacao has been a great staple of Agricultural produce; it has been introduced in countries of tropical America, cacao production faces multiple limiting factors that result in a decline in yield. Multiple species have been found to host cacao plants, each focusing on distinct body components of the cacao plant, such as the pods, leaves, roots, and stems, eventually degrading agricultural production. The research will focus on collecting and identifying parasitoids belonging to the Hymenoptera order associated with cacao plants and potential cacao insect pests' biocontrol. Specifically on the parasitic Hymenoptera families, which have the potential to become or have been documented as a cocoa pest biological control. The order Hymenoptera are collectively known to possess parasitic characteristics, these insects are known to be able to be natural enemies of many agricultural pests by consuming different life stages of pests. The objective of the study is to the identification of the different parasitic Hymenoptera families present in cacao-exporting countries; compare the parasitic Hymenoptera families found in locations cultivating cacao; and determine the most dominant Parasitic Hymenoptera family present in the selected countries. The study revealed that there are seventy-nine identified families of Hymenoptera which are used or have the potential and have been introduced in plantations to parasitize cacao pests, the Trichogrammatidae, Braconidae, Encyrtidae, and Eulophidae these four families are documented to be used as biological controls in other agricultural plantations and have been proven to parasitize on major cacao pests.

Keywords: *Biological Control, Natural Enemies, Parasitoids, Cacao Pests, Parasites*

VIRTUE ★ EXCELLENCE ★ SERVICE

CODE:	EACCIMRC-3-47

TITLE: Rote Learning and Critical Thinking of Students: Prospects for Reflective Learning Strategies

AUTHOR/S: *Cheng Yue; ZhaoGongYan*

AFFILIATION/INSTITUTION/S: ZhaoGongYan: Emilio Aguinaldo College HeNan University-China

ABSTRACT

This study assessed the relationship between students' Rote Learning and Critical Thinking Skills of Kiafeng University, Henan, China towards prospects for reflective learning strategies.

This study is a descriptive, comparative – correlational research. The researcher based the inquiry on two adopted questionnaires. The first tool was adapted from the Multifactorial Memory Questionnaire (MMQ). For the second instrument, the researcher adapted the Critical Thinking Assessment Test (CAT). The participants in this study were 118 students as samples. wherein two students were purposively selected from 59 majors, regardless of their age, sex and year level.

The following conclusions were arrived at by the researcher: This research surveyed student respondents who are mostly females who are more than 20 years old and are mostly sophomore students; It was found out that the student respondents exhibited a high level of rote learning. This study manifested no significant difference in the assessment of student respondent s on their level of rote learning in terms of satisfaction, ability and strategy when their sex, age and year level are taken as test factor. This goes to show that no difference was determined in the students' perception towards rote learning regardless of their profile; It was realized that student respondents exhibited a high level of critical thinking in terms of evaluating information, creative thinking, and problem solving. The study showed no significant difference in the assessment of student respondents on their level of critical think ing in terms of evaluating information, creative thinking and problem solving when their sex, age and year level are taken as test factors. The advisers shared viewpoints on the distinctiveness of teaching and learning process of Chinese students that impact on the way they view both rote learning and critical thinking; 8) The researcher proposed reflective teaching strategies. The focal point of reflective learning is internal reflection that looks into one's strengths and weaknesses. The process happens when the students establish and explicate meaning in terms of their own understanding and thinking, challenging misconceptions, providing clarity and accepting changes in an objective perspective.

Keywords: *Rote learning, Critical thinking, Learning Strategy*

CODE:	EACCIMRC-3-57
TITLE: **Designing a Timetabling Management Information System in one of the Senior High Schools in Carmona, Cavite**	
AUTHOR/S: Anamarie D. Fernandez	
AFFILIATION/INSTITUTION/S: Cavite State University - Carmona Campus	

ABSTRACT

Manual timetabling methods are time-consuming and prone to errors. This study aims to address the challenges faced by XYZ Senior High School in timetable generation and propose a feasible solution. The research investigates the impact of poor scheduling procedures on student motivation, faculty delivery, and overall organizational management. To overcome these challenges, a comprehensive feasibility analysis is conducted, considering technical, operational, and economic aspects. The theoretical framework employed in this study is the Product Design Theory (Zeng and Gu, 2008). This theory outlines the product design process, starting from design requirements and extending to product descriptions. Furthermore, the conceptual framework identifies the variables involved in the cause-and-effect relationship of the research topic, with a particular focus on design requirements, specifications, and descriptions. Descriptive research methodology is employed to provide a comprehensive description of the current timetabling process at XYZ Senior High School, while also elucidating the need for incorporating specific components in a timetabling management information system. Ethical considerations concerning data security and privacy are also briefly addressed in the study. An operational feasibility instrument is developed to evaluate the potential design of a Timetabling Management Information System for the school's needs. The findings shows that the proposed system design is well-received and highly satisfactory among the school employees. Moreover, the study determines that the school possesses adequate information and communication technology (ICT) facilities, while the staff demonstrates sufficient knowledge in terms of technical support. In conclusion, this research makes a significant contribution to the development of effective solutions for educational institutions to enhance their timetabling processes and foster a conducive learning environment. By implementing an automated timetable scheduling system, XYZ Senior High School can overcome the challenges associated with manual timetabling, resulting in improved efficiency and organizational effectiveness throughout the institution.

Keywords: *student motivation, faculty delivery, Product Design Theory, scheduling procedures, organizational management*

CODE:	EACCIMRC-3-59
TITLE: **Level of Awareness, Effectiveness and Employee Engagement of Non-Teaching Personnel In Relation To Performance Evaluation**	

AUTHOR/S: Marisol M. Remollo-Mack[1], Rhona R. Maaba[2], Angelo V. Mercado[3], Cristelle Gay O. Martinez[4]

AFFILIATION/INSTITUTION/S: [1] and [3] Human Resource Management and Development Office, Emilio Aguinaldo College, City of Dasmariñas, Cavite
[2] Office of Community Outreach and Alumni Services, Emilio Aguinaldo College, City of Dasmariñas, Cavite
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[4] Office of the Vice President for Academic Affairs, Emilio Aguinaldo College, City of Dasmariñas, Cavite

ABSTRACT

The purpose of this study is to analyze the level of awareness, level of effectiveness and employee engagement of non-teaching personnel in terms of performance evaluation at Emilio Aguinaldo College Cavite, Philippines (EAC). The results will aid to boosting employee engagement and overall organizational performance by identifying potential areas for improvement in the performance management process. This study employed a quantitative research design to examine the relationship between the performance evaluation process and employee engagement among non-teaching personnel at EAC. A survey questionnaire was administered to a purposive sample of non-teaching personnel, capturing demographic information, ratings of awareness, effectiveness, and employee engagement. The data revealed that most non-teaching personnel at EAC belong to the clerical job classification, indicating their significant role in the organization. The study assessed the level of awareness on performance evaluation among non-teaching personnel and found that majority of the respondents rated themselves as "fully aware" of the types, frequency, and purposes of performance evaluation suggesting that the organization has effectively disseminated information about performance evaluation, promoting transparency and understanding. The study also revealed a strong positive correlation between the level of awareness and employee engagement, indicating that higher awareness of performance evaluation is associated with increased employee engagement. These findings highlight the importance of effective communication, awareness, and perceived effectiveness in promoting employee engagement and optimizing the performance evaluation process at EAC

Keywords: *Employee Performance Management, Human Resources, Organizational Management, HR Practices*

CODE:	EACCIMRC-3-61

TITLE: **Development and Implementation of Document Management System for Ilocos Sur Polytechnic State College, Tagudin Campus**

AUTHOR/S: Dante T. Angala, Bentsen Chris O. Casugay, Hazel Mae Q. Estillore, Jessica B. Lebantino, Sophia O. Maracha, Jhon Eric C. Valdez, George R. Villanueva Jr.

AFFILIATION/INSTITUTION/S: College of Arts and Sciences, Ilocos Sur Polytechnic State College, Tagudin Campus, Tagudin, Ilocos Sur

ABSTRACT

With the exponential growth of paper documents daily, organizations face significant challenges in storing, maintaining, and managing these piles of paper data. Even with the increasing trend toward digitalization, many businesses and institutions still rely heavily on paper documents. However, accumulating physical copies can quickly become overwhelming, resulting in limited storage space, difficulty finding specific information, and increased operational costs. As the ISPSC prepares to become a university with additional campuses and a larger population of students and staff, managing paper-based documents remains a challenge for the institution. This study developed and implemented a web-based Document Management System (DMS) at ISPSC, Tagudin Campus, as a tool designed to capture, store, organize, retrieve, and manage documents and files in a centralized digital environment. The study analyzed the respondents' user-satisfaction using a standardized 20- statement of the Website Analysis and MeasureMent Inventory (WAMMI) questionnaire. An online survey was conducted on the respondents (n=40) who had experience in using the DMS.   The respondents were generally very satisfied with how the document management system was used to arrange, store, track, and manage paper files inside the campus.

Keywords: *Documented Information, Rapid Application Development, WAMMI, User satisfaction, Quality Management System*

CODE:	EACCIMRC-3-67
TITLE: **Student Perceptions on the Scholarships Services at Emilio Aguinaldo College Cavite, Philippines**	
AUTHOR/S: Kimbert M. Mack, Phoebe Gay Callot, Denisse De Grano	
AFFILIATION/INSTITUTION/S: Emilio Aguinaldo College	

ABSTRACT

OBJECTIVE: Emilio Aguinaldo College Cavite, Philippines (EAC) recognizes the significance of scholarships in promoting equitable access to education and supporting student success. Understanding students' perceptions and confidence levels regarding the process of finding and applying for scholarships is essential for EAC to improve its scholarship services and ensure that all eligible students can take full advantage of these opportunities. This research aims to explore the perceptions of students at EAC regarding their confidence in finding and applying for scholarships. By examining students' perspectives, this study seeks to identify potential barriers and areas for improvement in the scholarship application process. Moreover, it aims to shed light on the factors influencing students' confidence levels and provide insights into strategies that can enhance students' awareness and engagement with scholarship opportunities.

METHODS: This study employed a descriptive research design to explore the perceptions of students regarding their confidence in finding and applying for scholarships at EAC. The descriptive design allows for a comprehensive analysis of students' perspectives, attitudes, and experiences related to scholarships. The primary data collection method is a structured questionnaire survey. The questionnaire consisted of both closed-ended and Likert scale items, designed to capture participants' perceptions, confidence levels, and experiences regarding finding and applying for scholarships. The survey was administered electronically through an online survey platform, ensuring ease of access and confidentiality of responses. The questionnaire was developed based on a comprehensive review of relevant literature and the specific research objectives of this study. The items covered various aspects, including students' awareness of scholarship opportunities, sources of information, perceived barriers and challenges, confidence levels, and suggestions for improvement. The questionnaire was pilot tested with a small group of students to assess its clarity, validity, and reliability.

RESULTS: According to the data gathered from 433 respondents, 96.1% are college students, while a low percentage are either senior high school students or those pursuing law. It was discovered that 62.4% of respondents agreed that they are satisfied with the services delivered when evaluating how scholars perceive the scholarship services provided by EAC. A mean rating of 64.0% among the scholars also showed that most of them thought the scholarship application procedure was effective. The study also showed that student orientations, information from the admissions office, the student manual, and social media platforms were the main sources of scholarship information. Additionally, it was discovered that college academic scholarships, merit scholarships, and varsity scholarships were the respondents' most well-known categories of scholarships. However, a weak inverse association with a Pearson correlation coefficient of -0.060 was found when the respondents' current level of education and their impression of the mean rating for the scholarship services were compared. The data analysis did not reveal a meaningful connection between the respondents' education level and how they perceived the scholarship

services, despite this unfavorable link. Therefore, it can be said that the scholars' perceptions of the scholarship services offered by EAC are not significantly influenced by the scholars' level of education.

CONCLUSIONS: Overall, this study provides valuable insights into the perceptions and experiences of students regarding scholarships at EAC. The findings can inform scholarship providers and educational institutions about students' specific needs and preferences when it comes to scholarships. By addressing these needs and enhancing the scholarship application process, institutions like EAC can better support students in their pursuit of educational opportunities and contribute to their overall success. Further research and targeted interventions can build upon these findings to continually improve scholarship services and enhance student satisfaction and engagement.

Keywords: student services, academic scholars, non-academic scholars, customer satisfaction

CODE:	EACCIMRC-3-68

TITLE: PAGBABAGO (RECOVERY): Deconstructing Social Alienation from the Narratives of Meanings and Life Experiences of Rehabilitated Illegal Drug Dependents through the lens of Restorative Justice

AUTHOR/S: **Marina D. Gamo, Ralph Aerol Musni**

AFFILIATION/INSTITUTION/S: **Emilio Aguinaldo College**

ABSTRACT

We are all on a journey here. The road to justice that restores is long, with many curves, dead-ends, and unknowns. Moreover, at least in the West, we are very early on this journey. We need all the help from each other that we can get.
Salaam
Dr. Howard Zehr, October 2003

Perhaps one of the most sensitive and socially neglected areas in studies about society, nowadays, is the situation of rehabilitated illegal dependents and their lives before and after an experience of illegal drug use. This paper is an attempt to analyze the challenges faced by the men and women who have undergone and are still undergoing the process of PAGBABAGO (RECOVERY) through dimensions of engagements and disengagements, processes of connections and disconnections, and discourses on attachments and detachments they had undergone; thus, arguing that they experience both social engagements and disengagements in specific life domains as they reconstruct their lives and undergo a process of recovery. Using the Care System Model (Gamo, 2007) as a model of social reintegration from social alienation, the study utilizes the layering scheme in problematizing concepts, such as social acceptance and social alienation, and in understanding the meaning of meanings of their life experiences in pagbabago (recovery). The primacy of the participants' experiences and perspectives is the core principle of the model. Through the application of qualitative research methods to grasp phenomena in a holistic way, to understand phenomena within context, and to emphasize immersion in and comprehension of human meaning (Lincoln, 1992). The paper draws insights into analyses of the narratives of life stories of eight (8) participants from the province of Cavite. The participants of the study were located through the recommendations of friends from the health sector, colleagues from the proponent's place of work, and linkages and networks from selected barangays.

The researcher met the participants individually and after a thorough discussion of the goals of the study, 8 out of 15 accepted the challenge to actively take part in the study. The participants were requested to write an unstructured and free-willing story of their life experiences from childhood with their families, schoolmates, neighbors in their community, and peer groups. Using thematic analysis, the major themes that emerged from the narratives of life stories were the crisis of identity, recognition of self-worth, trust, and respect from peers institutional challenges (family and local government), social alienation to social acceptance, and "going back". The inductive approach was used to frame the majority of the data that is collected from the analysis of the precise content to broader generalizations and finally to theories that ensured that themes are effectively linked to the data (Patton, 1990). The narratives of participants were treated not only as narrative

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inquiry data but as stories of men and women who have struggled and faced the challenges of social alienation from their community. The findings of the study resulted in the emergence of major themes. The intervention measures results to (a) how this study could become a tool in drawing a needs-based program (b) contribute to the paradigm of restorative justice practices, and (c) further defined the mutuality of obligations and responsibilities of multi-stakeholders in the community. The study opened avenues for the state (government) and non-state actors (NGOs), business groups, religious organizations, the mass media, the church, and the academe in exploring creative and critical solutions, to supplement the problems of resource mobilization and to find ways in securing more humane, achievable, implementable and non-selective rehabilitation programs and policies for the rehabilitated and those undergoing rehabilitation.

CODE:	EACCIMRC-3-69

TITLE: Housework-based exercise versus conventional exercise on health-related fitness of adolescent learners

AUTHOR/S: [1*]Dr. Jem Cloyd M. Tanucan, [2]Dr. Marino A. Garcia, [3]Dr. Marlon T. Bojos

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ABSTRACT

There is a void in the literature comparing the fitness effects of housework-based exercise (HBE) and conventional exercise (CE), including studies that adapt housework into an exercise program. This study examines the effectiveness of HBE and CE on adolescent learners' health-related fitness (HRF) and compares the effectiveness of the two exercises. This study uses a parallel-group, randomized controlled trial with 120 adolescent learners; 60 are in the HBE group, and 60 are in the CE group. The participants in the HBE group exercised using housework activities, while the participants in the CE group exercised by doing push and pull, squats, lunges, leaps and jumps, planks, etc. The participants in both groups trained for at least an hour every weekday for 12 weeks under the supervision of qualified fitness instructors. The findings show that HBE improves the fitness levels of adolescent learners, albeit it has no significant improvement in their BMI. Furthermore, HBE significantly improves the cardiorespiratory fitness of females more than males. Finally, CE outperforms the HBE in producing more significant and favorable fitness effects. When planned, implemented, and monitored carefully as an exercise program, doing housework is just as good as doing traditional exercise for keeping or improving adolescent learners' fitness. Furthermore, the findings indicate that HBE may be more appropriate for females because it involves household-related tasks that they traditionally perform. However, CE produces more positive and significant fitness effects. Thus, teachers can use HBE in the remote exercise activities of their learners along with CE.

Keywords: *adolescent, health, household chores, traditional exercise, randomized controlled trial*

CODE:	EACCIMRC-3-70

TITLE: Socio-Demographic Determinants of Filipino School Leaders' Digital Leadership

AUTHOR/S: [1*]Dr. Jem Cloyd M. Tanucan, [2]Mr. Crislee V. Negrido, [1]Ms. Baby Jane Uytico, [3]Dr. Walton Wider

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ABSTRACT

The field of digital leadership in the Philippines is limited, despite the country's growing regard on school digitization. This study investigated the socio-demographic factors that influence Filipino school leaders' digital leadership. These factors included age, gender, years of service, educational attainment, location of school, and type of school. A cross-sectional survey was conducted with 386 school leaders in the Philippines. Convenience sampling was used, which means that the respondents were selected based on their availability and willingness to participate. The invitation link to the survey was distributed through various social media platforms. Descriptive data using frequency and percentage, and independent t-test and one-way analysis of variance (ANOVA) were employed to examine the study's variables. The study found that younger male leaders, those working in urban or private schools, those who are relatively new in their leadership roles, and those with higher educational qualifications tend to have higher levels of digital leadership. This means that socio-demographic factors of school leaders can influence their digital leadership. It also emphasizes the critical need for in-depth research into the nature and implications of digital leadership in the Philippine educational landscape, focusing on how socio-demographic factors influence the adoption of digital leadership skills. Professional development opportunities and other means of support for school leaders on technology in education can be designed and delivered more effectively using the findings.

Keywords: *digitalization, leadership, education for sustainable development, school heads, technology*

CODE:	EACCIMRC-3-71

TITLE: **Human Rights-Based Policing: Capability-Building, Knowledge, Practices and Challenges of Filipino Policemen in Cavite, Philippines.**

AUTHOR/S: Aileen D. Ybañez, Shelley Anne M. Masagca, Mark Jay H. Masagca

AFFILIATION/INSTITUTION/S: School of Criminology, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite

ABSTRACT

The policemen are one of the main actors in promoting and protecting human rights in the country. This study aims to determine the capability-building efforts, knowledge, and practice of human rights-based policing (HRBP), and the challenges of HRBP practice among Filipino policemen in the Province of Cavite, Philippines. This study utilized the mixed method design and administered researcher-made questionnaires to 48 PNP personnel assigned to selected city and municipality police stations in the province. Findings showed that most of the respondents have not attended any human rights training but had read the PNP Human Rights-Based Policing Manual, and had witnessed the recognition of PNP personnel who exemplified themselves for the cause of human rights. Generally, the respondents understood the HRBP principles under Standard 1: Equal protection, Standard 4: Policing non-violent assemblies, Standard 6: Arresting persons on legal grounds, Standard 7: Detainees' Rights, Standard 8: Humane Treatment of detainees, and Standard 9: Refusal to obey unjust orders based on their scores in the true-false survey. Also, the respondents have shown inclinations to practice HRBP in different real-life scenarios presented to them. The challenges that confronted the respondents revolved around issues of adherence to standard operating procedures, equal protection, political influence, inhumane treatment of suspects, and the need for legal services of the PNP. Results suggest strengthening human rights education among PNP personnel and revisiting measures to provide equal protection to both the community and law enforcement members.

Keywords: *Human rights education, Human rights promotion, Equal protection, Arresting individuals, Police operations*

CODE:	EACCIMRC-3-72
TITLE: **Environmental Awareness Thru Green Marketing and the Consumption Behavior of a Selected City: Towards an Improved Marketing Model**	
AUTHOR/S: Estampador, Julius Rae; Baysa, Glenda; Cardones Enrico	
AFFILIATION/INSTITUTION/S: College of Business Administration Adamson University	

ABSTRACT

Every year different activities in the Philippines are conducted by both private and government organizations to raise environmental awareness like the "Earth Hour," which promotes energy conservation. Many products nowadays have also been designed to be more eco-friendly like biodegradable packages and cleaner fuels. In researches conducted abroad the correlation between Green Marketing and the environmentally-friendly actions of people have been established but locally there seems to be a lack of study on the matter. Hence the decision of the researchers to conduct the study. The research aimed to determine the extent of environmental awareness thru green marketing and its influence on the consumption behavior of residents of City of Manila. The study used the descriptive and inferential methods of research. The population of the study is the City of Manila and the sampling method used were purposive and convenience for two hundred sixty one residents who qualified based on certain criteria. The data gathering instruments used were questionnaires and interview. Percentile, Weighted Mean, and Pearson Product Moment Correlation were the statistical treatment used.

The research found that there is a significant relationship between Green Marketing and the consumption behavior of residents of the City of Manila and it recommends that companies should invest more in Green Marketing activities and use the Green Product Adoption Model.

Keywords: Environmentalism, Conservation, Sustainability, Eco-Friendly, Biodegradable

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ACCOUNTANCY, BUSINESS, AND MANAGEMENT STUDENTS

CODE:	EACCIMRC-3-31

TITLE: Level of Acceptability of Banana Stem and Jackfruit Burger Patty Among Burger Vendors in Imus City, Cavite

AUTHOR/S: Irish Ellesha V. Ito, Jasmine R. Ramos, Francesca P. Urbano, Althea Bianca M. Quillopo, Jhyll M. Vallega, and Jed Ryan S. Panganiban

AFFILIATION/INSTITUTION/S: Senior High School Department, Unida Christian Colleges, Imus City, Cavite

ABSTRACT

This study sought to ascertain the level of acceptability of banana stem and jackfruit burger patty among burger vendors in Imus City, Cavite. To assess the acceptability of a banana stem and a jackfruit burger patty, the researchers employed a descriptive quantitative design using the adopted instrument, which focused on sensory properties from their sensory evaluation sheet, and the researchers specified each category into a survey questionnaire and a Likert scale. Respondents were purposely selected in Imus City, Cavite, with a targeted 100 sample size. Furthermore, the sensory qualities of food, such as taste, texture, aroma, and appearance, have distinct and significant impacts on food acceptability. Based on the findings, a weighted mean of 3.28, or interpreted as highly acceptable in terms of taste, has the highest acceptability level. On the other hand, the aroma has the least acceptability level, which had a mean of 3.2 or was interpreted as acceptable. Regarding the overall acceptability of the banana stem and jackfruit burger patty, the findings revealed a general weighted mean of 3.24, which was interpreted as acceptable. Future researchers are recommended to focus on improving the product by maintaining its quality or selecting other alternative sustainable ingredients to innovate the product, to have an extensive study focusing on various respondents, and put the product in marketing to assess whether the products will have market potential.

Keywords: *Principles of Sensory Evaluation, Sustainable Food, Taste, Texture, Aroma, Appearance*

ABSTRACTS

COMPUTING, AUTOMATION, ENGINEERING, AND TECHNOLOGY

STUDENTS

CODE:	EACCIMRC-3-23

TITLE: Mechanical Properties of Bio-based Concrete with Partial Replacement of Rice Husk as Fine Aggregate

AUTHOR/S: Hedrene G. Tolentino*, Jay-r N. Lasmarias, and Kurt Jason B. Jayme

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ABSTRACT

There is a dire need for further research regarding the suitability of rice husk as a concrete ingredient and its effect on the properties of various grades of concrete, seeing that the utilization of rice husk in the construction industry can address several environmental issues by reducing both the consumption of sand and the generation of agricultural waste. This research was conducted in Dasmariñas, Cavite, and was limited to 2%, 4%, and 6% partial replacement of rice husk as fine aggregate. The general objective of this study is to determine the mechanical properties, both compressive strength and modulus of elasticity, of M-20 bio-based concrete with partial replacement of rice husk as fine aggregate. An experimental research design was applied in this study, with the control group consisting of conventional concrete test specimens and the experimental groups consisting of bio-based concrete test specimens. Data were gathered through testing, calculation, and evaluation. The researchers concluded that rice husk is a suitable constituent of concrete at 2% partial replacement of fine aggregate. Future researchers are advised to focus on percentages of partial replacement equal to or less than 2%, unless an admixture is used. Moreover, they could investigate other properties and grades of bio-based concrete, and consider utilizing different equipment, apparatuses, and substances for the experiment.

Keywords: *Compressive strength, Modulus of elasticity, Construction material, Agricultural waste, Sustainability*

CODE:	EACCIMRC-3-27

TITLE: **Modern Integration of Non-internet General Queueing System (MIONG.qs): The Ticket Queue Dispensing Robot**

AUTHOR/S: Dronxenette Emerlyn M. Baltazar, John Noah G. Jonson, Arvin Mathew Paguinto, and Nikko Angelo P. Quilo

AFFILIATION/INSTITUTION/S: School of Engineering and Technology, Emilio Aguinaldo College – Cavite Dasmariñas City, Cavite

ABSTRACT

Considering the increase in student enrollment and the growing replacement of the manual queueing procedure, educational institutions must modernize their services. This research designed and developed a ticket queue dispensing robot and a kiosk-based automated queueing system at Emilio Aguinaldo College – Cavite (EAC–C) to help students and visitors in reducing the inconvenience of waiting in line and establishing a fair queueing line by. It utilized experimental research that contains descriptive developmental form and employed convenience sampling – a total of one hundred thirty-five (135) college student respondents from the Bachelor of Science in Computer Engineering program at EAC–C during the second semester of the academic year 2022–2023 participated; the robotic arm testing occurred for two (2) days, eight (8) hours each day. Evaluation of the respondents' answers on the Software Product Quality of ISO/IEC 25010:2011 yielded mean scores of 5.54, 5.40, and 5.44 for Functional Suitability, Performance Efficiency, and Usability, respectively, with an overall mean score of 5.46. The proponents' observation of the robotic arm's performance, outlined in NISTIR 8177 Robot Performance Key Performance Indicator, with mean scores of 0.9944 and 0.9950 for Position Accuracy and Position Repeatability, respectively, with an overall mean score of 0.9947, and the average ticket distribution process took 25.28 seconds. MIONG.qs: The Ticket Queue Dispensing Robot has been successfully designed and developed by the proponents, encompassing the web application, database, robotic arm, and hardware. It underwent comprehensive evaluation through survey questionnaires and robotic arm testing, adhering to ISO 25010:2011 and NISTIR 8177 guidelines.

Keywords: Queueing System, Kiosk, Robotic Arm, Self-service, Queueing Ticket

CODE:	EACCIMRC-3-30

TITLE: **MyGlucose: An Online Diabetes Monitoring System With Diabetes Prediction Feature Using Supervised Classification Algorithm**

AUTHOR/S: Ivan Duane R. Dequito, Shaker Mahmoud V. Aljoubori, Argel Joseph B. Bernido, Vincent Joseph Lacno

AFFILIATION/INSTITUTION/S: School of Engineering and Technology, Emilio Aguinaldo College-Cavite, Dasmariñas City, Cavite

ABSTRACT

Diabetes is a non-communicable disease that can affect a person's ability to produce or use insulin. Insulin regulates blood sugar levels. Blood sugar rises when the body can't utilize it well. AI (Artificial Intelligence) has grown to the point where it can make diagnoses based on an algorithm and a large dataset. The general objective of this study is to create a diabetes management system with a diabetes prediction feature for Emilio Aguinaldo College Cavite clinic. The research study was conducted through a mix of online surveys and in-person interviews which included both BS in Computer Science students of EAC Cavite and working professionals in the medical field and the IT field. A total of sixty-eight (68) Computer Science students and two (2) IT professionals evaluated the system using ISO 9126 characteristics. Three (3) medical professionals assessed the quality assurance of the system's diabetes prediction model. The system was assessed using the ISO 9126 characteristics and said data were compiled in an Excel spreadsheet. The analysis of results demonstrated that the web application developed produced favorable results. Body Mass Index (BMI), Diabetes Pedigree Function (DPF), and a person's age can be used as predictors for Diabetes risk, with the best classification algorithm being random forest algorithm. Machine Learning plays a role in the medical sector. The developed diabetes prediction model produced favorable results and has vast potential in the medicine field.

Keywords: *Non-communicable diseases, Algorithm, Artificial Intelligence, Machine Learning, Random Forest*

CODE:	EACCIMRC-3-35

TITLE: **LOKAL: A Secured Contact Tracing Application using GPS and AES-128 Algorithm**

AUTHOR/S: Paaño, David Carl V., Patdo, Virgilio Joshua T., Roxas, Sean Vastian C., Santos, John Limuel B., Teodoro, Keith Andre F.

AFFILIATION/INSTITUTION/S: School of Engineering and Technology, Emilio Aguinaldo College-Manila, Manila City, Metro Manila

ABSTRACT

In the Philippines, a significant number of individuals go missing each year. While there are existing contact tracing applications such as StaySafe, WeTrace, and Traze, their functionality could be improved as they rely solely on QR codes and Bluetooth. It restricts their availability and their ability to present data on a map. A proposed application that utilizes GPS to track people's visited places and visualize them on a map has been developed to address these limitations. To ensure the security of user data, AES-128 encryption will be implemented. This measure aims to prevent data breaches like the one on Twitter in November 2022, where 5.4 million users' data was stolen and leaked online. By employing AES-128, the gathered user data will remain confidential, complying with the Data Privacy Act of 2012. The study conducted experiments to assess the accuracy of GPS coordinates in various scenarios, including open areas and obstructed locations. Different smartphones were used in both fixed and motion positions. Additionally, the resistance of the AES-128 algorithm to brute-force attacks was evaluated. The findings revealed that the developed application successfully tracked visited places using GPS and provided accurate coordinates. However, the margin of error varied depending on the environment, with obstructions affecting the accuracy. Furthermore, the AES-128 algorithm proved highly resistant to brute-force attacks, ensuring the security of the encrypted data. The estimated time required to crack the encryption using current technology has exceeded trillions of years. Overall, this study contributed to developing a secure contact tracing application that leverages GPS technology and strong encryption to protect user data and enhance tracking capabilities for missing persons.

Keywords: *Route Replay, Brute Force Attack, Margin of Error, Map Visualization, Tracking*

CODE:	EACCIMRC-3-43

TITLE: ScoutDroid: Basketball Visualization for Analyzing Shot Performance using the K-Means Algorithm

AUTHOR/S: Chelsia Marie C. Bañez, John Michael Paglaon, Lance Leo Ian D. Amido, Lyrra P. Mallari, Mark Joseph Chapa

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ABSTRACT

In basketball, historical data has proven to be of utmost importance when evaluating a team's performance. Coaches and players heavily rely on statistics derived from basketball results to gain invaluable insights into their strengths and weaknesses across different facets of the game. Nevertheless, these statistics often fail to fully uncover the details regarding players' shot placements on the court. Consequently, coaches and players have traditionally invested significant time reviewing and analyzing past matches to prepare for future games. This study focuses on visualizing shot locations through scatter plots and analyzing real-time results on mobile devices. The development lets coaches and players better understand their strengths and weaknesses during games and practices.

Furthermore, implementing the K-Means clustering algorithm was to identify typical areas on the court where players excel or struggle in their shot placements—evaluating the effectiveness of the clustering technique by using the silhouette score, which yielded an impressive value of 0.69, affirming its reliability within this context. These insights provide valuable information about individual and team shooting percentages and offer a comprehensive understanding of overall performance. By emphasizing the main objective and research methodology, this study contributes to advancing basketball analysis and supports informed decision-making for coaches and players.

Keywords:

CODE:	EACCIMRC-3-65

TITLE: **ArguAria: Real-Time Water Quality Monitoring and Temperature Controlled System with Automatic Fish Feeder**

AUTHOR/S: Ambona, Mark Anthony C., Magbanua, Albert John R., Malabanan, Kayecilyn D., Manlapaz, Joven Quiel B.

AFFILIATION/INSTITUTION/S: School of Engineering and Technology, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite

ABSTRACT

This project aimed to develop an integrated system for real-time temperature control and water quality monitoring in a flowerhorn cichlid tank. The system incorporated a robotic arm, automatic fish feeder, and various sensors to measure pH, temperature, ammonia, and turbidity. A study involving 50 aquatic shop employees was conducted for alpha and beta testing, using expert-validated questionnaires. The correlation coefficient between the system's software and hardware variables was found to be 0.696135095, indicating a strong positive connection. The Cronbach's alpha reliability test yielded a value of 0.638, suggesting moderate but acceptable internal consistency. The prototype successfully detected and measured water temperature, with a range of 26.67 °C to 31.67 °C, pH within the range of 6.5 to 7.8, and ammonia levels classified as high or low. Turbidity was classified into three thresholds: clear, cloudy, and dirty. User feedback indicated high usability and satisfaction with the system. These results demonstrate the effectiveness of the integrated system in monitoring the environmental conditions of flowerhorn cichlid fish, providing accurate temperature control and maintaining water quality parameters. The developed system has practical applications in aquarium management and aquatic research.

Keywords: *water quality monitoring system, temperature control system, robotic arm, microcontroller*

ABSTRACTS

EDUCATION, HUMANITIES, AND SOCIAL SCIENCES
STUDENTS

CODE:	EACCIMRC-3-19

TITLE: Alternative Dispute Resolution: A Key To Peace And Order In The Barangay Level

AUTHOR/S: Christine Faye W. Alvarez, Corinne Ann B. Sarabia, Margie O. Rivera, Christian Vener A. De Guzman, and Lance Cristian D. Carriedo

AFFILIATION/INSTITUTION/S: *School of Criminology, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite*

ABSTRACT

This study focused on the effectiveness of Alternative Dispute Resolution in maintaining peace and order in the Barangay Level. It aimed to determine the extent of application of ADR in the Barangay and the level of success of the ADR applied in the three barangays, barangay Sabang, barangay Salitran II, and barangay Sabang I. The researchers utilized the descriptive-correlational research design to determine the relationship between the extent of application of ADR and the level of success of ADR in the three barangays. The findings of the study reveal "highly applied" in relation to the "extent of application of ADR in the Barangay level." The assessment found that the Lupon Tagapamayapa properly implemented the application of ADR in the barangay level which provided proper service to the people in accordance with the law (Republic Act No. 7160 or also known as the Local Government Code of 1991). The study showed that the level of success of ADR applied in three barangays is very successful. The result made by the Lupon Tagapamayapa on the significant relationship between the extent of application of ADR and the level of success of the ADR applied in the barangay is less than or equal to the level of relationship at 0.5 concluded that there was no significant relationship. The results made by the parties on the significant relationship differ from the results made by the Lupon Tagapamayapa. The data presented showed that the essence of ADR in the barangay level to "maintain peace and order" had been practiced.

Keywords: *Lupon Tagapamayapa, Parties, Conciliation, Mediation, Alternative Dispute Resolution*

CODE:	EACCIMRC-3-20

TITLE: Content and Language Integrated Learning (CLIL) as a Tool in Developing Students' Skill in Writing an Expository Essay

AUTHOR/S: Winchester M. Canteras

AFFILIATION/INSTITUTION/S: *School of Education, Emilio Aguinaldo College-Cavite, Dasmariñas City, Cavite*

ABSTRACT

Writing an expository essay requires a writer to generate factual ideas to be presented in the text. On the other hand, many students struggle in supplying enough information in writing an expositor essay. This action research focused on developing Junior High School students' skills in writing an expository essay through the utilization of Content and Language Integrated Learning (CLIL) approach. The integration of the students' Science lesson in discussing the standards of writing an expository essay enabled the students to generate enough factual ideas in their essay writing activity. The findings were analyzed through the use of Documentary Analysis for both students' Pre-CLIL and Post-CLIL expository essays. The developments focused on the students being able to hook the readers' interest, effectively introduce the topic in the introduction, supply accurate information in the body with enough topic sentences, support the topic sentences with additional information and present a strong conclusion. In addition, the development of the students was reinforced through a Focus Group Discussion where the researcher found out that the CLIL approach helped students to describe the topic based on their learning in Science, provide information from their Science book, acquire prior knowledge about the topic and learn both English and Science in one activity. The utilization of CLIL approach in the teaching and learning process developed students' skill in writing an expository essay.

Keywords: *Educational Trend, Writing Intervention, Writing Skill Development, Essay Writing, Integration Across Curriculum*

CODE:	EACCIMRC-3-28

TITLE: Students' Self-Regulated Learning Strategies, Self-Efficacy, and Mathematics Performance in a Mobile Technology Integrated Classroom of Selected Grade 8 Learners

AUTHOR/S: Rico Gabriel A. Ramos, Jhossua A. Caragay, Gerald C. Apostol

AFFILIATION/INSTITUTION/S: *School of Education, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite*

ABSTRACT

This quasi-experimental research design's objective was to determine the students' self-regulated learning strategies (SRLs), self efficacy (motivation), and mathematics performance (MP) in the mobile technology-integrated face-to-face classroom and predict potential indicators of MP among (simple randomized) 82 selected Grade 8 learners of San Jose Community High School of General Mariano Alvarez, Cavite, before and after the instruction. The values required for analyses were obtained using descriptive and inferential statistics. The questionnaires were validated and found reliable (excellent), and assumptions for parametric tests were met. Both the traditional classroom and the mobile technology-integrated classroom (intervention) resulted in statistically significant differences (improvements) between the pre-test and post-test, SRLs, and self-efficacy means. However, comparing the two groups and variables in groups, the intervention was more effective and found to have enhanced the SRLs, self-efficacy, and MP of learners. Rehearsal and extrinsic goal orientation were the most utilized SRLs and self-efficacy subscales of the MSLQ, respectively. Out of nine subscales of SRLs, only the rehearsal and metacognitive self-regulation subscales served as predictors of learners' MP with a predictive accuracy of approximately 68.5% (good model). Thereof, learners were motivated (increased self efficacy) in learning mathematics by engaging in an activity or task for motives like grades, performance, comparing one's performance to that of others, evaluation by others, and rewards. And with the proper planning, monitoring, assessing, understanding, and rehearsing of a skill over and over in order to gain proficiency, this affected the students' mathematics performance.

Keywords: *extrinsic goal orientation, face-to-face learning , mathematics achievement, metacognitive self-regulation, motivated learning strategies, motivation in learning, rehearsal learning strategy, technology integrated education*

CODE:	EACCIMRC-3-33

TITLE: Level of English Reading Comprehension among Selected Grade 10 Students during the Post-Pandemic Era among selected Public and Private Schools in Imus City, Cavite for the A.Y. 2022-2023

AUTHOR/S: Samaniego, Niña Juliana S., Saracanlao Lance Mc Julius L., Mequiota, Jhullian Rio R., Flores Maria Natasha S., Alkuino, Samuel Erick M., and Naelgas, Elaiza Jayne V.

AFFILIATION/INSTITUTION/S: Senior High School Department, Unida Christian Colleges, Imus City, Cavite

ABSTRACT

There had been significant changes to the learning curriculum of students during the pandemic. Students have lost significant learning time due to the rapid transition from traditional activities to online learning. The study investigated the reading comprehension of Grade 10 students among selected public and private schools during the post-pandemic in Imus City, Cavite. The study is descriptive research under comparative analysis. An assessment tool questionnaire was used to determine the reading comprehension abilities of the chosen Grade 10 students. The locales were General Emilio Aguinaldo National High School (GEANHS) and Imus National High School (INHS) for public schools while the private schools had Del Pilar Academy (DelPa) and Our Lady of the Pillar Catholic School (OLPCS). GEANHS had the greatest mean percentage score, while INHS had the lowest. On the other hand, DelPA received the greatest mean percentage score among private schools, while OLPCS received the lowest. The general reading level for public schools was instructional, with a mean of 59.85%, while the overall reading level for private schools was frustration, under 52.87%. Both public and private schools accumulated a grand mean of 56.51%, which is the reading level of frustration (F). Overall, the mean score for reading comprehension was higher in public schools (M=59.85, SD=13.03) than in private schools (M=52.87, SD=12.87), t(429)=5.592, p<.001. Few students can grasp texts above their grade level since few students are at the independent level.

CODE:	EACCIMRC-3-40

TITLE: Social Media Needs and Identity Distress Level among Third Year College Students at Emilio Aguinaldo College – Cavite

AUTHOR/S: [1]Raven May T. Acosta, [2]Glenn C. Hansen, [3]Wayne L. Arguelles, [4]Desiree R. Delos Reyes, and [5]Ms. Maria Archie A. Cabig, MP

AFFILIATION/INSTITUTION/S: [1]School of Arts and Sciences, Emilio Aguinaldo College-Cavite,
City of Dasmariñas, Cavite

ABSTRACT

College students, as young adults, undergo a significant developmental phase where identity-related issues are inevitable, and social media play a vital role in making sense of this concern. This research intends to examine the relationship between social media needs and the identity distress level of young adult users. The respondents of this study are third-year college students (n=46) who are heavy social media users, K-12 completers, and enrolled at Emilio Aguinaldo College Cavite. The purposely selected participants answered a two-part survey questionnaire adopted from the SNSUN scale to assess their social media needs and Identity Distress Scale to measure their identity distress level. Results showed that cognitive needs (μ= 4.43) were ranked as the highest need sought on social media, followed by diversion (μ= 4.32), social integrative (μ= 4.14), affective (μ= 3.43), and personal integrative needs (μ= 3.14). In terms of identity distress, the participants reported experiencing moderate identity distress (μ= 2.67). Moreover, social media needs were found not to be significantly correlated with identity distress level, with negative to positive weak correlations. The findings of the study indicate that socia media have become a primary source of information and a facilitator of communication for students, especially during online setup and limited interactions. It also serves as a facilitator of self-expression and entertainment that can reduce the distress they feel.

Keywords: *Identity Issues, Young Adults, Mental Health, Digital Health, Social Networking Sites, Motives*

CODE:	EACCIMRC-3-48
TITLE: **Grade Inflation: The Relationship Between Leisure Time and Academic Performance of Selected Grade 12 Students**	
AUTHOR/S: Daitan, Ghero; Adores Lester; Baylon, Arrianelle; Caday, Rio Marian Nicole; Colesio, Arabella Sheen; Compuesto, Wilfredo Louis; Curva, Chantel Ann; Diano, Ethan; Echevarria, Shanniah Mae; Eclarino, Chrystine Karylle; and Recolcolin, Shane Anryhm; and Mrs. Beltran, Mariefe	
AFFILIATION/INSTITUTION/S: Emilio Aguinaldo College – Cavite Senior High School	

ABSTRACT

Grade inflation is the awarding of grades higher than students deserve. Grades will eventually reach a ceiling, making it harder for institutions to determine students' capabilities. It distorts the feedback students receive which hinders self-improvement. This problem has become more rampant since the pandemic started. Numerous students were suddenly awarded high and highest honors, making educators and institutions confused and skeptical.

There are plenty of research studies that support the idea that students who study more attain higher grades (Spitzer, 2021). Meanwhile, Felisoni and Godoi (2017) concluded that prolonged cellphone use causes a decrease in students' academic performance. Thus, it is safe to assume, using the Effort Investment Theory of Power, that students who put more effort and give more importance to their studies would acquire better grades. However, due to grade inflation, this would not be the case. Instead, students acquired higher grades despite putting in less or minimal effort.

This study utilized a correlational design and simple random sampling to determine the relationship between leisure time and students' academic performance. The researchers gathered 165 participants and used a 5-point Likert scale questionnaire to collect the data. The Pearson's R test showed a 0.36 R-value and a 0.13 critical value, indicating that there is a significant positive correlation between the variables. This means that students receive higher grades despite spending the majority of their time doing leisure activities. The researchers conclude that grade inflation is present among the students of Emilio Aguinaldo College Cavite. However, under the degree of correlation guideline, these values would only indicate a weak positive correlation between the variables. The researchers recommend a larger sample size to achieve better results.

Keywords: *Grade inflation, academic performance, leisure time, students*

CODE:	EACCIMRC-3-51

TITLE: **Navigating the Shift from Virtual Learning to Clinical Practice:A Phenomenological Investigation of Nursing Students' Transitional Experiences**

AUTHOR/S: **Micah Huns V. San Juan, Lliane Gabrielle E. Reyes, Iñigo S. Gambito, Jasmine Nichole A. Galapon**

AFFILIATION/INSTITUTION/S: Olivarez College Tagaytay, Emilio Aguinaldo Highway, Barangay San Jose Tagaytay City

ABSTRACT

This phenomenological study aimed to explore the experience of Nursing students at Olivarez College Tagaytay during their transition from a two- year virtual setting to face-to-face modalities with hospital exposure. Moustakas' Descriptive Transcendental phenomenology was employed as the research approach, with five participants selected through purposive sampling technique. Face-to-Face interviews were conducted until data saturation was achieved, and the modified Vann Kaam phenomenological process was used for data analysis. Computer-Assisted Qualitative Data Analysis Software (CAQDAS) specifically MAXQDA was utilized to enhance rigor.

The findings revealed themes related to the experiences of the students. The first themes, "Positive and Negative Mien", highlighted their experiences in both virtual and hospital settings. Whereas the second theme "Thyself Gratification and Psyche Disgruntlement", showed that despite the challenges, many students found satisfaction and pleasure In the transition. The importance of support from family, friends, and peers was emphasized in the theme "Significance of Interconnectedness". While the theme "Subsist Scheme: A tenacious attempt" identified self-directed learning as a coping strategy for catching up with coursework. Based on the findings, the study recommends for the students to develop time management and study techniques to prioritize tasks, increase productivity, and boost motivation. Techniques for promoting productivity, limiting distractions, understanding concepts, and overcoming challenges of self-directed learning are also suggested. These recommendation aim to support students during transitional situations in nursing education.

Keywords: *Phenomenology, Nursing Education, Transition, Virtual modality, Conventional face-to-face, First hospital exposure*

CODE:	EACCIMRC-3-60
TITLE: **Tsismis And Chismosa Culture Towards Emotional Coping Strategies: A Grounded Theory Framework**	
AUTHOR/S: Rio, John Uldrick S., Ballesteros, Cid Elizier Kent C., Beltran, Celina Marie T., Durante, Jay-Ar T., Garcia, Eirra Mhae V., Rosanes, Jo Frances O., and Tampos, Cedric Jorphen	Mrs. Jennie D. Obrero	
AFFILIATION/INSTITUTION/S: Emilio Aguinaldo College – Cavite Senior High School	

ABSTRACT

Tsismis and chismosa culture is an informal activity that promotes expressing the engager's discomfort about an absent person. Aside from its collaborative abilities, it is perceived as a coping strategy to alleviate certain stressors. People in dynamic settings like nurses utilize it to relieve emotional tension from emotional labor (John et al., 2018) and to investigate repercussions of misconduct (Xie et al., 2019). Certain goals were also established before a tsismis, whether for satisfaction, intelligence gathering, or adherence to standards (Hartung et al., 2019; Bechtoldt et al., 2020; Romera et al., 2019). Nonetheless, it is unclear how it is employed by students with respect to their certain stressors. The study seeks to establish a theory that discusses its employment to ease their feelings of stress, anxiety, and emotional labor. Thus, it used a grounded theory approach. Through purposive sampling, five (5) participants were interviewed individually through an online synchronous medium. Using thematic analysis, the superordinate themes Connection, Hedonistic, and Susceptible are the main answers to the general research questions. It was found out that privately, students build a connection to disclose their issues and assess their struggles. Receiving information about the absent target is rooted in their stress for hedonistic gratification. It enables them to be susceptible to facts and rejects falsifications as they obtain gratification from tsismis. Due to this, it is recommended for the students to have prior knowledge to be aware of such phenomenon and to comprehend the effects of tsismis on a person's reputation.

Keywords: *Tsismis, Chismosa Culture, Emotional Coping Strategies, Stress, Grounded Theory*

ABSTRACTS

NATURAL AND PHYSICAL SCIENCES, HEALTH CARE AND TECHNOLOGY

STUDENTS

CODE:	EACCIMRC-3-10
TITLE: **Relationship of Pneumonia Incidence and Risk of Exposure to Coronavirus Disease 2019 In Dasmariñas, Cavite: A Cross-Sectional Study**	
AUTHOR/S: Renea Sheanne L. Torres, Geraldine B. Monzon, Pauline Claire Silangcruz, Yenzai Ritz D. Martinez, Nicolle Fhey C. Apalit, John Christian Layosa	
AFFILIATION/INSTITUTION/S: School of Medical Laboratory Science, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite	

ABSTRACT

Pneumonia is an infection causing diseases, contagious, and spread when in contact with individuals suffering from the infection. Active communicable bacterial and viral infections progress itself to infect an individual concurrently at the same period of time. The study aims to determine the correlation and explain the risk factors that are associated with pneumonia incidence and its risks of exposure to coronavirus disease 2019 (COVID-19). The risk of exposures to COVID-19 of pneumonia patients in Dasmariñas, Cavite was assessed through survey questionnaires. Multiple logistics regression was used to analyze the association of the variables. The association of comorbidity factor- high blood pressure as a risk to COVID-19 shows significance in gender (p value= 0.012) of pneumonia patients. Lifestyle factor- alcoholic as a risk shows significance in intercept (p value= 0.027) and in age (p value= 0.025). Lifestyle factor- abuse use of antibiotic drugs as a risk shows significance in age (p value= 0.024). Other risks in lifestyle shows significance in age (p value= 0.029). Seeking medical attention only during quarterly of a pneumonia patient with comorbidity as another risk factors shows significance (p value= 0.013). The risk factors that shows correlation between the two variables should not be neglected knowing the harm of pneumonia patients. Considering the consequences of bacterial or viral secondary infection, simultaneous infection, and superinfection that could put pneumonia patients at utmost risk due to complications. The study limits the history of the recurrence of pneumonia to the patient, timeframe, causative agents, newborns and children, and population.

Keywords: *Pneumonia Incidence, Risk of Exposure, Dasmariñas Cavite, Primary Infection, Secondary Infection, Simultaneous Infection, Co-infection, Superinfection*

CODE:	EACCIMRC-3-11

TITLE: **Assessment Of The Factors Affecting The Job Satisfaction Of Registered Medical Technologists Working In Clinical And Anatomical Laboratories In The Philippines**

AUTHOR/S: Rosaldo, Febery Nuise G., Angala, Mariel Samantha A., Baugh, John Vincent M., Bautista, Ynah Emmanuelle G., Dejaño, Kimberly A., Magtibay, Leonardo Gabriel A., Dayrit, Geraldine B

AFFILIATION/INSTITUTION/S: School of Medical Technology, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite

ABSTRACT

Job satisfaction is an emotional response that reflects how individuals enjoy their occupations. The primary aim of this study is to measure the job satisfaction of Medical Technologists in clinical and anatomical laboratories in the Philippines. The researchers addressed the lack of studies available in the country that focuses on job satisfaction since there was an observed low retention rate amongst the Medical Technology profession. A cross-sectional study design was used; a modified Paul Spector's Job Satisfaction Survey (JSS) was utilized to 313 selected participants using purposive sampling, where the sociodemographic variables were added on the first part of the questionnaire. Majority of respondents were female (60.38%), age between 20-29 years old (51.76%), and employed in clinical (93.61%), private (64.54%) and hospital-based laboratories (81.79%) with 2-5 years of experience (74.44%) and have a salary range of Php 20,000 to Php 29,999 (59.11%). Welch'sAnalysisof Variance (ANOVA) and independent t-test established a significant difference (p<.05) between groups of respondents regarding their region and salary range, working area and years of experience, respectively. A significant difference (p<.05) between age groups was also shown by Kendall's Tau-b Correlation. Among the intrinsic factors, dissatisfaction was seen in contingent rewards (54.63%) and promotion (40.89%); while they conveyed satisfaction with the nature of work (69.01%). In extrinsic factors, they showed dissatisfaction with pay (67.41%), fringe benefits (69.33%), and operations (56.55%); satisfaction with supervision (75.40%), co-workers (77.00%), and communication (69.33%). Regarding the overall job satisfaction, the majority of the respondents were ambivalent (62.94%). Kendall's Tau-b Correlation applied on intrinsic and extrinsic facets deemed significant to job satisfaction (p<.001) and displayed positive correlation to overall job satisfaction. Among the identified sociodemographic factors— region, working area, years of experience, age, and salary group were measured to have a significant impact on the job satisfaction of medical technologists in the Philippines. All of the identified intrinsic and extrinsic facets established a significant relationship to the overall job satisfaction.

Keywords: *Registered Medical Technologists, Sociodemographic Factors, Intrinsic Factors, Extrinsic Factors, Job Facets, Philippines*

CODE:	EACCIMRC-3-13

TITLE: **Knowledge, Attitude, and Practice on Face Masks and Gloves of Medical Technologists in Cavite**

AUTHOR/S: Balmonte, John Joshua S., Catangay, Lerin Jon H., Dala, Cyle Ashley L., Estrada, Raymart T., Gonzales, Argene Denise S., Ison, Earl Florenz G., Llamas, John Austin D., Mendoza, John Roter R.

AFFILIATION/INSTITUTION/S: School of Medical Technology, Emilio Aguinaldo College-Cavite Dasmariñas City, Cavite

ABSTRACT

Before COVID-19, medical technologists did not fully appreciate the importance of face masks and gloves. The pandemic changed this, and now face masks and gloves are essential to infection control in healthcare settings. The study aimed to determine the knowledge, attitude, and practices (KAP) regarding the proper use of face masks and gloves among medical technologists in Cavite. A total of 151 medical technologists working in healthcare facilities with laboratories in Cavite were selected as survey participants. Female medical technologists (59.6%), younger individuals 18-24 years old (67.5%), and those with shorter duties 6-12 hours (85.4%) showed a significant relationship to knowledge, attitude, and practice on the proper use of face masks and gloves. All 151 respondents know that quality face masks and gloves are important and that face masks should be worn regularly at work. However, only 82 (54.3%) know how long a surgical mask can be worn. 140 of the respondents (92.7%) expressed positive attitudes towards wearing face masks in three specific situations: according to protocol, during specimen collection, and in the working area. 141 (93.4%) expressed a positive attitude towards wearing gloves properly according to protocol. 92.1% wore gloves during phlebotomy because they believed it was safe. The study concluded that providing medical technologists with additional training, ensuring that they have an adequate supply of face masks and gloves, and requiring them to follow laboratory protocols will help to ensure that they properly use face masks and gloves.

Keywords: *Face shield, Protective handwear, Expertise, Mindset, Protocols, Healthcare laboratory Professionals*

CODE:	EACCIMRC-3-14

TITLE: **Effectiveness of Astrazeneca, Gamaleya Sputnik Light and Sputnik V, Janssen, Moderna, Pfizer, Sinopharm, and Sinovac as Boosters Against the Omicron Variant: A Meta Synthesis**

AUTHOR/S: Acuram, Allyssa Aira F., Caballero, Noreen D., Cruz, John Henrie C., Pakingan, Kimberly Mae K., Pojol, Lance Cedrik C.

AFFILIATION/INSTITUTION/S: School of Medical Technology, Emilio Aguinaldo College-Cavite, Dasmariñas City, Cavite

ABSTRACT

Since being declared as a pandemic in March 2020, the Coronavirus disease (COVID-19) has affected at least 4 million people in the Philippines as of December 2022. Vaccinations were legally rolled out in the country on March 1st 2021, reaching up to 50 million vaccinated individuals by October 2021. However, the Omicron variant, with its unique characteristic of increased infectivity, caused cases to rise after its emergence on November 24, 2021. By year's end, booster shots were introduced to combat the Omicron variant, but the number of boosted individuals is still low as compared to those with complete primary vaccination. Studies have shown that vaccine hesitancy in the Philippines is a major contributor to the discrepancy. Factors that influence hesitancy include information-related variables such as lack of knowledge regarding vaccines, and mistrust. To address this, we conducted a meta-synthesis on available booster vaccines in the Philippines against the Omicron variant to expound on the effectiveness of these vaccines in combating COVID-19. We conducted a comprehensive literature search in the NCBI, ScienceDirect, Online library, National library of Medicine, Pubmed, Google Scholar, and Crossref using Harzing's Publish or Perish from September until November 2022 using the terms "COVID-19", "SARS COV-2", "Omicron" and keywords "booster vaccine", "effectiveness" "Hospitalization", "Mortality", Symptomatic illness". From a total of 16 reviewed studies, the findings supported the selected vaccine's effectiveness in protection against the Omicron variant and its outcomes, and mRNA vaccines found as most effective among others. This review may contribute to promoting COVID-19 booster vaccines.

Keywords: *Booster, Covid - 19 , Omicron , Effectiveness Symptomatic illness Incidence of infection, Hospitalization, Mortality, Vaccine hesitancy*

CODE:	EACCIMRC-3-18

TITLE: Evaluation of Crystal Violet – D Tagatose Agar as a Selective Media for Streptococcus Pneumoniae

AUTHOR/S: Falsis, Aldrin James S., Butiong, Edgar Jr. R., Gomez, Princess L., Orense, Alta Gracia A., Patacsil, Cristina Marie F., Razo, Marilee Gem Hadeel C.

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ABSTRACT

D-Tagatose, also known as tagatose, is a stereoisomer of fructose with physical and sensory properties like sugar, and it has been proposed for use as a sugar or carbohydrate source substitute. Limited number of microbial taxa uses tagatose as carbohydrate source where it acts as phosphorylated intermediate of the tagatose-6-phosphate pathway in lactose, galactose, and galactical catabolism. Streptococcus pneumoniae is dependent on glycolytic metabolism which makes it a fermentative bacterium reliant on a carbohydrate source specifically on glycan-derived sugars. The study aimed to produce a new selective medium for Streptococcus pneumoniae that will inhibit most clinically isolated bacteria. The study investigated the growth of Streptococcus pneumoniae and inhibition of other clinically significant bacteria in the presence of tagatose as a carbohydrate source and crystal violet and NaCl as the inhibitors on the prepared selective medium. The evaluation of the selective medium was done in triplicates and data analysis by Friedman test suggest that at least one of the three types of selective media may isolate Streptococcus pneumoniae since $x^2 = 9.58$ with p-value = 0.008 which is significant at 0.05 confidence level. This indicates that crystal violet – tagatose based selective media may allow the growth of Streptococcus pneumoniae and inhibit other clinically significant bacteria.

CODE:	EACCIMRC-3-21

| TITLE: **In Vitro Activity of Biologically Synthesized Silver Nanoparticles by** *Escherichia coli* **Against Multidrug Resistant Biofilm Consortium Isolated From Sewage** ||

| AUTHOR/S: Ma. Janelle C. Sudaria, Rhowie Erin C. Saylon, Nherrie C. Estrada, Ivan Josh B. Del Rosario, Romyr John Andrei M. Posadas, Christian Angelo A. Bataller, Geraldine B. Dayrit, Supachai A. Basit ||

| AFFILIATION/INSTITUTION/S: *School of Medical Technology, Emilio Aguinaldo College-Cavite* *Dasmariñas City, Cavite* ||

ABSTRACT

Knowing the presence of numerous pathogens in sewage and their ability to form biofilms, it is a concern to preserve water quality. Therefore, the present study was designed to compare the in vitro activity of biologically synthesized silver nanoparticles by *Escherichia coli* against formation of multidrug resistant biofilm consortium isolated from sewage. The experimentation involved the analysis of a sewage sample collected from a Higher Educational Institution which was inoculated in Lauryl Tryptose Broth (LTB), in triplicate, and in Violet Red Bile Agar with Lactose (VRBL). The isolate purified in Brain Heart Infusion (BHI) broth was analyzed using VITEK® 2 COMPACT. Subsequently, a culture of *Escherichia coli* was cultivated in Luria Bertani (LB) broth to produce biomass. The pellet from the biomass mixed with 0.001 M silver nitrate was prepared for the biological synthesis of silver nanoparticles and was characterized through Scanning Electron Microscopy (SEM). Meanwhile, the effect of biosynthesized silver nanoparticles on biofilm formation was evaluated through in vitro biofilm inhibition in a microtiter plate which was performed in triplicate and the analysis was done by ELISA reader. One-Way ANOVA and Post-Hoc Analysis were used as statistical tools. The Most Probable Number (MPN) Index showed an infinite value of coliforms. VITEK® 2 COMPACT detected the presence of *Escherichia coli*, *Pseudomonas aeruginosa*, *Klebsiella pneumoniae* ssp. *pneumoniae*, and *Morganella morganii* ssp. *morganii*. It also determined that the isolates were resistant to some standard antibiotics. Regarding silver nanoparticles, the SEM images showed that the diameter ranged from 33.61-263.20 nm and was 132.54 nm in average. Fundamentally, the readings on microtiter plate showed significant difference in the optical densities of biofilm without treatment (0.312) and biofilm treated with 60% and 80% silver nanoparticles (0.191 and 0.210, respectively), $p = 0.001$. The silver nanoparticles biologically synthesized by *Escherichia coli*, at a concentration of 60% and 80%, can inhibit the formation of multidrug resistant biofilm consortium in vitro.

Keywords: *Wastewater, Coliform, Most Probable Number (MPN), Scanning Electron Microscopy (SEM), Microtiter Plate, ELISA Reader*

CODE:	EACCIMRC-3-25

TITLE: The Use of Enhanced Urine Culture Technique In Detection of Clinically Isolated Urine Pathogens: Meta-Synthesis

AUTHOR/S: Baterina, Sophia Lyka P.,Clarion, Ronnine E., Dungao, Christine A., Gloria, John Henry L., Hebra, Patricia Mave A., Odeña, Guia E., Ramirez, Gabrielli McKenzie L., Velante, Alona, Vicedo, Miguel Antonio S.

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ABSTRACT

OBJECTIVE: The use of enhanced urine culture technique detects clinically isolated urine pathogens that were undetected/missed or reported to be "negative" in the standard urine culture protocol (SUC). The purpose of this study is to discuss and determine the use and effectiveness of enhanced urine culturing technique to improve the diagnosis and detection of clinically isolated urine pathogens that can be associated with clinical diseases such as patients exhibiting either symptomatic or asymptomatic cases of urinary tract infections

METHODS: Meta-synthesis was used to approach this study by forming new theories and ideas from collected qualitative studies about the effectiveness of using the enhanced urine culture technique. The collected studies must provide the following data about: "different urine cultivation protocol", "comparison of the used urine cultivation protocol" and "effectiveness of the enhanced urine culture technique". A PRISMA four phase flow diagram and checklist was used to map out the selection phase of 1102 gathered data into 8 included data in the study.

RESULTS: The enhanced urine culturing technique utilizes larger volume of urine samples, addition of culture agar plates and broths, longer incubation periods at various atmospheric conditions that can aid in the detection of some anaerobes, slow growing, atypical or microorganisms with special requirements. Aside from detecting the most common causative agent of UTIs which *is Escherichia coli*, the enhanced urine culture technique can also detect low biomass and abundance of microorganisms in the urine samples such as *Lactobacillus, Corynebacterium, Enterococci, Morganella, Providencia, Gardnerella, Candida, Streptococci, Staphylococc*i and other microorganisms that can cause urinary tract infections. This technique is also complementary to the use of molecular techniques in detection and identification of urinary pathogens by detecting "live" microorganisms from the samples that the molecular techniques such as 16S rRNA, DNA sequencing, next-generation sequencing and PCR can't differentiate.

CONCLUSIONS: Urine culturing technique is the gold standard for detection of urinary pathogens which can be detected using EQUC and SUC. When employed, these two provide rather distinct outcomes. The researchers concluded in the study that EQUC was superior to other culturing methods for detecting clinically isolated uropathogens.

Keywords: *EQUC, enhanced/expanded quantitative urine culture technique, colistin-nalidixic acid (CNA) agar, 16S rRNA, urine cultivation protocol*

CODE:	EACCIMRC-3-26

TITLE: **Practices of Street Vendors and Bacteriological Quality of Food Sauces Collected Within and Outside An Academic Institution in Dasmarinas City, Cavite**

AUTHOR/S: Ma. Theresa Jean T. Bergonio[1], Haida S. Braga[2], Dainelle Louise Cinco[3], Jetro B. Enano[4], Danielle S. Mainit[5], Reign Bridgette N. Sorreda[6], Supachai A. Basit[7], Geraldine B. Dayrit,[8]

AFFILIATION/INSTITUTION/S: *School of Medical Technology, Emilio Aguinaldo College Cavite*

ABSTRACT

Street-vended foods are popular among the public due to their affordability, availability, and accessibility. However, concern regarding quality and safety may be overlooked by some consumers. This study aimed to investigate the presence of bacteria in street food sauces sold outside and inside a school institution in Dasmariñas, Cavite. Additionally, the study aimed to compare the bacterial load between the two locations. A survey was also conducted with vendors to assess their food handling practices. This study utilized a descriptive-comparative design to examine the microbiological quality, including the number and phenotypic characteristics of street food sauce. Purposive sampling was employed to identify stalls where street food sauces were collected, ensuring informed consent was obtained. Three sweet-flavored dipping sauces were collected, with two obtained from outside stalls and one from inside the school. Serial dilution was performed to obtain a statistically significant number of colony-forming units (CFUs), which were streaked on culture media plates for colony isolation. The grown samples were then macroscopically assessed and subjected to biochemical tests to identify specific types of pathogens. The result of One-way ANOVA showed that there is no significant difference in the bacterial load of street-vended sauces across locations of collection $F_{(2,6)}=.899$, $p=.455$. Conversely, the study revealed that samples collected from outside vendors exhibited a higher occurrence of bacteria, with a mean CFU/ml of $4.55 \times 10^8/L$ and $0.42 \times 10^8/L$ compared to $0.57 \times 10^8/L$ inside the school. Based on the study's findings, it can be concluded that there is no significant difference in the bacterial load between street food sauces obtained from outside and inside stalls within an academic institution. Therefore, consumers are advised to exercise caution when purchasing street food with sauces from both locations.

Keywords: *Dipping Sauces, Culture, Isolation, Bacterial Load, Food Handling*

CODE:	EACCIMRC-3-36

TITLE: Investigation of the Presence of Bacteria from Re-used and Unsanitized Tourniquet for Phlebotomy in Tertiary Hospital and Free-standing Laboratory

AUTHOR/S: Reyna Marie Aberca, Giselle Commandante, Tricia Marie Cupino, Alyssa Julienne Legaspi, Jelene Kyla Morada, Trisha Mae Morales, Eiannah Alecza Paragas, Geraldine B. Dayrit, RMT, MSc, DRDM, Virgie D. Silvestre, RMT

AFFILIATION/INSTITUTION/S: School of Medical Technology, Emilio Aguinaldo College-Cavite Dasmarinas, Cavite

ABSTRACT

The CLSI guidelines recommended using single-use tourniquets to avoid the spread of infections acquired in hospital settings when tourniquets are reused. However, reusing tourniquet is still common in developing country like the Philippines. This study was done exclusively
to identify and count the estimated number of bacteria present in the re used tourniquets for phlebotomy. A longitudinal experimental design was used to investigate the extent of re-used unsanitized and sanitized tourniquets. The free-standing laboratory and tertiary hospital are both located at Salitran, Dasmariñas, Cavite. New tourniquets were provided by researchers that were used by the Medical Technologist or Phlebotomist.

Tourniquets were labelled as "A" for hospital, and "B" for free-standing laboratory. Tourniquets are used for 7, 14, and 30 days. All swab samples from the given days were collected and tested by Conventional Phenotypic Methods and Biochemical Tests. It was sent to another laboratory to perform necessary procedures to confirm the isolated bacteria from the tourniquets. 18 tourniquets were included in the study. No bacterial growth was observed on any of the 6 control tourniquets. 3 out of 3 (100%) of the unsanitized tourniquets utilized from a tertiary hospital for 7, 14 and 30 days have shown bacterial growth. 1 out of 3 (33.33%) sanitized tourniquets used in a tertiary hospital exhibited no growth and 2 out of 3 (66%) demonstrated contamination. In a free-standing laboratory, 3 out of 3 (100%) unsanitized tourniquets used for 7,14 and 30 days have shown bacterial growth. 2 out of 3 (66%) sanitized tourniquets utilized in free
standing laboratory displayed no growth, and the 1 out of 3 (33.33%) has contamination. Although tourniquets are regarded as not critical medical equipment, research has shown that they may function as bacterial reservoirs that can spread to patients. Sanitizing tourniquets may be a useful strategy to stop the spread of bacteria, but if it is not done, it may actually increase it.

Keywords: *Contamination, Reservoir, Isolation, Colonies, Phlebotomy · Infections, Reservoir*

CODE:	EACCIMRC-3-38

TITLE: Antibiogram Profile of Escherichia coli Isolated from Ylang-Ylang River Stream in Cavite, Philippines

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ABSTRACT

Antimicrobial resistance has emerged as one of the most significant global concerns in recent years, posing a serious threat to human health and placing an economic burden on global healthcare systems. Aquatic habitats serve as "hotspots" where mobile genetic elements like integrons, transposons, and plasmids can transfer genes for antibiotic resistance between different bacterial species. The objectives of this study are to collect and identify Escherichia coli bacteria from the Ylang-Ylang River, determine their minimum inhibitory concentration (MIC) to conventional antibiotics, and categorize their sensitivity to those drugs. By achieving these goals, the research desires to gain insight into the presence and characteristics of E. coli in the river, evaluate their response to different antibiotics, and provide valuable information for understanding and addressing potential health risks associated with these bacteria in the healthcare environment. Triplicate samples were collected from each sampling location and cultivated in Lauryl Tryptose Broth. MacConkey and Eosin-Methylene Blue Agar were used to inoculate the gas producing-bacteria on the broth. The colonies were subcultured further to get pure colonies. To establish the presence of E. coli, a biochemical test was performed. With the use of VITEK 2, the antibiotic susceptibility test is also carried out to determine the MIC. Out of 27 samples, only 4 were phenotypically and biochemically similar to E. coli and confirmed its presence by using VITEK 2. In susceptibility testing against 22 standard antibiotics, 50% of isolates were resistant to Ampicillin, 25% were resistant to Trimethoprim-Sulfamethoxazole and Tetracycline, 25% were intermediate to Cefotaxime and Cefuroxime axetil, the rest of the results were susceptible. The study's findings indicate that microorganisms are always present in the river. The presence of E. coli identified from collected river samples poses a risk to the health of residents around the Ylang-Ylang River and animals that benefit from it. Although most isolates are still susceptible to many antibiotics, resistance still occurs. The activities of humans are the catalyst for the spread of pathogenic and multidrug-resistant microorganisms. Due to some antimicrobial-resistant E. coli determined in the study, with the use of antimicrobial susceptibility testing, it calls for improvement of prevention strategies to protect and promote public health.

Keywords: *Escherichia coli, Ylang-Ylang River, Susceptible,Antibiotics, Minimum Inhibitory Concentration, VITEK 2*

CODE:	EACCIMRC-3-39

TITLE: Antibiotic Resistance Of Isolated Foodborne Pathogens Present In Pre-Cut Watermelon And Pineapple In Open Market And Supermarket

AUTHOR/S: Abalos F.K., Asuncion, M.G, Avelino, L.Y., Botona, A., Cuenca, M., Poniente, A.M., Santos, V., Dayrit, G., Salcedo, D.

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ABSTRACT

Pathogenic bacteria are common contaminants in fresh fruits and can be easily transmitted due to different factors. This study aims to isolate, characterize, and identify foodborne pathogenic microorganisms and their antimicrobial resistance from pre-cut watermelon and pineapple using phenotypic and genotypic methods. Randomly selected eighteen (18) pre-cut watermelon and eighteen (18) pineapple from supermarkets and open markets in Dasmariñas City, Cavite, were collected at 10:00 am, 1:00 pm, and 5:00 pm and further processed for bacterial culture, biochemical test, and antimicrobial sensitivity testing (AST). Molecular analysis was performed to identify and confirm the presence of antibiotic resistant bacteria. The results displayed microbial growth on all pre-cut watermelon samples (91.30%) and only two (2) of eighteen (18) samples on pre-cut pineapple (8.70%). Based on their phenotypic and genotypic characteristics, *Enterobacter cloacae, Bacillus circulans & Serratia nematodiphlia, Pseudomonas aeruginosa, Enterobacter ludwigii, and Klebsiella pneumoniae* were present in pre-cut watermelon. On the contrary, only *Klebsiella oxytoca* was found on precut pineapple samples. It was remarkable that the only gram-positive bacteria isolated (*Bacillus circulans*) showed resistance to Trimethoprim-sulfamethoxazole (SXT) ≥16 but susceptible to Oxacillin (OX) ≤21, Clindamycin (DA) ≤14, Penicillin (P) ≤28, and Vancomycin (VA) ≤32. On the other hand, most of the gram-negative bacteria isolated were resistant to Ampicillin (AM) ≤13 (33.93%), Amoxicillin clavulanate (AMC) ≤13 (33.93%), and Cefazolin (CZ) ≤14 (32.14%) but susceptible to Meropenem (MEM) ≥23 (34.42%), Amikacin (AK) ≥17 (29.51%), and Gentamicin (CN) ≥15 (31.15%). These isolated pathogenic organisms induce several gastrointestinal and extraintestinal infections, and the consequence of antimicrobial resistance to their drug of choice has been a serious concern for the medical community. Unsanitary handling of sliced fruits has the potential to spread resistant bacteria. A better handling process and health education are critical to preventing the spread of resistant bacteria through these otherwise commonly consumed fruits.

Keywords: *Antimicrobial Susceptibility Testing, Pre-cut fruits, Culture and Sensitivity, DNA Sequencing, Gastrointestinal infections, 16S rRNa, sequencing, Phylogenetic analysis*

CODE:	EACCIMRC-3-42

TITLE: **Prediction Mapping of Leptospirosis Cases in CALABARZON from 2015 to 2019**

AUTHOR/S: Pamela P. Geluz, Krisha Mae S. Lacambra, Cyprus Darylle Mae V. Macario, Colline Rose P. Ordiales, Jaymee Ruth R. Perdon, Reina Mae M. Villanueva; Prof. Geraldine B. Dayrit, Dr. Supachai A. Basit

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ABSTRACT

Leptospirosis is a rodent-borne infection recognized as a threat to public health, particularly in the tropics. It is caused by a bacteria from the genus *Leptospira*. Climate is one of the key contributing factors that influence the incidence of Leptospirosis. Infected animals may shed leptospires in urine which can contaminate bodies of water. Therefore, areas with poor sanitation and that remained flooded are at high risk of contracting Leptospirosis. The study was to establish a prediction mapping utilizing Multiple Linear Regression (MLR) with respect to the relationship of the level of meteorological parameters and Leptospirosis cases. Likewise, Pearson's correlation and scatter plot determined the relationship between the meteorological parameters and the incidence of Leptospirosis in CALABARZON for 2015 to 2019. Results showed that in terms of average temperature mean, the highest was observed in Cavite (T_{mean} = 29.4°C) from 2015-2019. For relative humidity mean, the highest was noticed in Rizal (88%) from 2015-2019. Whereas, the average amount of rainfall, the highest was exhibited in Quezon (267.7 mm) from 2015-2019. Out of the total 1,060 cases in the region from 2015-2019, the highest number of incidence was from the Province of Rizal (n=458). The findings of this study determined that there was no significant relationship between the incidence of leptospirosis and the temperature mean; a significantly direct relationship between the incidence of leptospirosis and relative humidity in CALABARZON was shown; a significantly direct relationship was revealed between the incidence of leptospirosis and amount of rainfall; scatterplot defined a positively low correlation between the incidence of leptospirosis along with temperature and amount of rainfall whereas a negatively low correlation with relative humidity; and no regression relationship between and among the variables was observed. The researchers conclude that Multiple Linear Regression (MLR) analysis may be used to predict incidence of leptospirosis in relation to meteorological parameters such as temperature, relative humidity, and amount of rainfall. However, in this study, the bivariate analysis using scatterplot established a more significant relationship between the variables. Therefore, the following recommendations are provided: using a wide range of years is suggested preventing data stratification; inclusion of socioeconomic and demographic factors be considered for concise implication about phenomenon; provision of structured interview for validations of effect; and availability of mapping software provided by school for more accuracy of analysis.

Keywords: *Leptospirosis, Leptospira Interrogans, Temperature, Relative Hummidity, Rainfall*

VIRTUE ★ EXCELLENCE ★ SERVICE

CODE:	EACCIMRC-3-49

TITLE: **Assessing the Readiness of Barangay San Jose to Taal Volcano Unrest: A Comprehensive Sequential Explanatory Mixed Method**

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ABSTRACT

This study aimed to assess and determine the level of readiness of the residents in Brgy. San Jose incase of renewed unrest of Taal volcano. It also seeks for a significant difference between the demographic profile of respondents in terms of community risk assessment. The study identifies recommended programs of action and utilized a sequential explanatory mixed-method approach to improve and evaluate the level of disaster readiness. The respondents were divided into groups and randomly selected using cluster sampling. In the quantitative phase, a questionnaire was administered to 117 respondents after ensuring its reliability with a Cronbach alpha indicating good internal consistency. Statistical treatments including ANOVA and t-test were applied to analyze the survey result. Gathering the data from the survey result, second phase of the study commenced were eight participants purposively selected from different puroks to provide explanations through semi-structured interviews employing thematic analysis method by Braun and Clarke. Computer assisted data analysis software was also utilized to facilitate the identification and explication of emerging themes from the interview data. The integration of quantitative and qualitative findings was conducted through weight means and its verbal interpretation to comprehensively measure and explain the readiness of selected respondents in terms of community risk assessment, hazards, vulnerabilities, all indicated "Always Ready" and capacities "Extremely Ready" with an overall result "Always Ready". The researchers developed educational materials to strengthen their readiness for emergency response skills including volcanic alert level, first aid and CPR information in the form of booklets.

Keywords: *Readiness, Disaster, Volcano, Barangay San Jose, Taal Volcano, Unrest, Sequential explanatory mixed method*

CODE:	EACCIMRC-3-50

TITLE: The Peak of Dawn: A Parallel Mixed Method Exploration towards Promotion of Family Planning

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ABSTRACT

Teenage pregnancies are one of the social youth problems that the country faces, with 5.4% or 5,531 crude births among ages 15-19 in 2022. The Peak of Dawn pointed to the height of sexual drive among adolescents and young adults that may cause a beginning (dawn) of life as both sexes can produce a product of conception, especially when a female is fertile. The results from the recent Community Organizing Participatory Action Research done last November 2022 by the BSN third-year students revealed that some of the participants refused to answer questions regarding family planning. The study employed a Parallel Mixed Method approach to assessing the level of knowledge, attitude, and practice–a KAP-modified questionnaire was administered to the 138 stratified participants with a Cronbach's alpha coefficient= 0.884. As well as to explore the perceived benefits, barriers, interpersonal influences, and self-efficacy among eight purposely selected participants through semi-structured interviews in every San Jose's Purok towards Family Planning. Descriptive and tests of difference were used to analyze the surveyed data. Thematic Analysis by Braun and Clarcke (2006), supported by MAXQDA software, was used to analyze the qualitative data. Integration of both findings provided a comprehensive understanding of the research topic. The study revealed significant findings among adolescents and young adults, including a low knowledge, a high attitude, and very low practice concerning family planning. Notable differences were observed between participants' KAP scores and their demographic profiles. Participants expressed a lack of awareness about various family planning methods and government services, with peers strongly influencing their perspectives. The researchers recommended implementing youth-friendly and non-judgmental family planning services to address these findings to enhance knowledge and awareness. A health promotion pamphlet was developed and will be made available at the Barangay Health Center as an information drive initiative.

Keywords: *Knowledge, Attitude, Practice, Modern Contraceptives, Natural Methods, Adolescents, Young Adults*

CODE:	EACCIMRC-3-52

TITLE: **"Visual Narratives of Sanitation Practices in Selected Barangay in Tagaytay City: A Photovoice Exploration"**

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ABSTRACT

Sanitation plays a vital role in community well-being, encompassing aspects such as healthy food, clean clothing, a clean living environment, sanitary latrines, and access to medical care. To explore this issue, the researcher employed Participatory Action Research and purposive sampling, focusing on residents of the selected barangay in Tagaytay City. The researchers chose the research locale to bridge the gap of the limited data about sanitation practices of COPAR study done last october 2020. The study involved ten participants or continued until data saturation was reached. A photovoice approach empowered participants to capture their surroundings, using pictures as the primary data for analysis. Additionally, two Focus group discussions session using semi-structured interviews, SHOWED, were conducted, gathering open-ended data on participants' beliefs and thoughts regarding sanitation as the picture presented during the session. Cross-comparative analysis and the use of MAXQDA Computer Assisted Analysis Software aided in data triangulation and explication of emerging themes. The study findings emphasized the need for improved home sanitation practices among the participants. Issues identified included disorganized house materials, inadequate food and water sanitation due to uncovered storage and slight deficiencies in water drainage caused by household solid waste. Based on these findings, the researchers recommended enhancing sanitation practices and promoting health in the selected purok in Tagaytay City. As part of their recommendations, an infographic titled "Hakbang para sa kalinisan, Kalusugan at Kaligtasan" (Steps for Cleanliness, Health, and Safety) was developed, providing information to community members on ways to clean, arrange, and organize their homes.

Keywords: *Sanitation, Environmental Theory, Photovoice, Community, Participatory Action Research*

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