

**SMU Research Abstracts**  
**Book of Abstracts Vol. 12 (2024)**  
**ISSN: 2423-1207**

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## PREFACE

It is with great pride and joy that we present this compilation of abstracts, showcasing the remarkable scholarly accomplishments of Saint Mary's University undergraduate and graduate students who completed their theses and dissertations from May 2024 to July 2025. This collection celebrates not only the intellectual rigor of our students but also their unwavering dedication to inquiry, creativity, and the pursuit of knowledge that serves both local and global communities.

The research works included in this volume span a diverse array of disciplines, reflecting the breadth of our students' interests and their deep commitment to addressing real-world challenges. Each abstract exemplifies the values of excellence, integrity, and responsibility, grounded in the vision and mission of Saint Mary's University: to nurture competent, compassionate, and committed individuals, inspired by Christ's mission and driven by a passion for transformative learning.

The University Research Center, in collaboration with our colleges and faculty mentors, is honored to present this volume as a testament to the perseverance, diligence, and creativity of our student-researchers. We hope that these research contributions inspire future scholars to continue the tradition of inquiry, innovation, and meaningful service to society.

We extend our heartfelt congratulations to the students who have completed their theses and dissertations, as well as to their advisers, panel members, and all those who have supported them along the way. This publication is a celebration of achievement, recognition of hard work, and a reminder of the vital role of research in advancing knowledge and shaping a brighter future.

On behalf of the University Research Center, I warmly commend all our student-researchers and the academic community for making this milestone possible. May this volume inspire continued excellence, creativity, and service in the years to come.

Dr. Melanie G. Sarmiento  
Director, University Research Center  
Saint Mary's University

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## Research Unit: School of Graduate Studies

### Panel of Reviewers:

| Area of Specialization                      | Name of Faculty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| Area of Specialization       | Name of Faculty                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Guest Lecturers/Panel</b> | Rommel S. De Gracia, LPT, PhD<br>Adelina C. Erfe, LPT, PhD<br>Marilyn P. Perolina, LPT, PhD<br>Samuel R. Soliven, LPT, PhD                                                                                                                                                                                                                                                          |

**Evaluation of A Multimodality Learning Program in Basic Education: Towards Learning Innovation and Flexible Teaching (LIFT)**

*Aireen O. Santos, PhD-Educational Management & Ma. Cristeta M. Aduca, PhD*

The study evaluated the Enhanced SMU Multimodality Learning Program (eSMLP) of the SMU Basic Education in school year 2021-2022. Employing mixed methods, the evaluation gauged the program's effectiveness among learners, parents, and teachers across the three educational units. Quantitative analysis focused on respondents' demographic and technological profiles, while qualitative approaches delved into experiences related to learning structure, dialogue, autonomy, preparation and support, and overall feedback. Data collection utilized survey questionnaires and examination of school documents. Overall, the findings indicated positive evaluations across various dimensions. Learning content and resources were favorably rated as aligned with educational standards. Multimedia tools were noted to enhance understanding. Assessment activities were perceived as fair and effective. Effective communication channels between teachers and learners were highlighted with suggestions for more interactive discussions. Learners demonstrated proficiency in navigating the eSMLP independently and managing academic workload effectively. Learners and their parents reported adequate preparedness for online learning ensured by accessible resources and support at home. Overall satisfaction with the eSMLP was expressed by stakeholders, emphasizing its interactive activities and personalized learning approaches. Challenges identified included technological issues, home environment distractions, and the necessity for further teacher training and communication enhancements. Stakeholders recommend enhancing instructional quality, improving internet connectivity, and fostering stronger partnerships among stakeholders. The study highlighted the eSMLP's positive impact on learning outcomes and the need for continuous improvement in addressing challenges to ensure effective blended delivery of instruction. Learning Innovation and Flexible Teaching (LIFT) is proposed to advocate inclusive learning environments supported by stakeholders.

*Keywords:* Autonomy, dialogue, preparation, structure, support, transactional distance

**Determinants of Life Science Research Productivity in Grade 12 STEM: Interplay of Student, Teacher, and Institutional Influences Towards Research Management Guidelines**

*Christian M. Santiago, PhD-Biology & Samuel R. Soliven, PhD*

Research is a vital process of innovation and development that affects society, and productivity has been an emerging concept in its measurement. However, this concept has only been investigated in Higher Education and only includes quantitative measures using bibliometrics. However, research is a foundational knowledge taught as early as the primary education level, in the Philippines formal research courses are introduced in the Senior High School Level, thus it is important that research productivity is well investigated including the dimension of quality in the matrix. This study focused to explore the determinants of research productivity of Science, Technology, Engineering, and Mathematics (STEM) Senior High School in Life Sciences Research in Central Luzon.

Using concurrent mixed method design, the study gathered qualitative and quantitative data using validated researcher-made instruments, answered by stratified-sampled grade 12 students (n=1251), research teachers (n=84), and school administrators (n=36).

Over three academic years, life sciences research productivity showed fluctuations, peaking before experiencing a decline. Research primarily focused on environmental and biomedical topics, using controlled experimental designs with biological variables. However, gaps were identified in areas such as Translational Science, Biophysics, Computational Biology, and Bioinformatics. Factors influencing research productivity included group dynamics, student interests, career paths, and curricular arrangements. Publications and presentations were relatively low, with mentorship and student engagement identified as key drivers for improving dissemination rates.

Qualitative research demonstrated competency, particularly in presenting results, using replicates, and rejecting hypotheses, though integrating life science concepts into discussions required improvement. Methodology implementation was strong, but literature review skills were weaker. Teachers showed average proficiency in research skills and mentorship, with moderate compliance to guidelines. Institutional research culture was generally rated as good, though variability highlighted the need for better resources and professional development. Research policies across schools indicated a need for improvement, with sustainable agendas, collaboration, and resource allocation identified as essential for enhancing productivity. Curricular structures mostly aligned with national standards, supporting research planning and execution.

Using regression analysis, student's English and Science entry grades, including Scientific Research Skills, Self-regulation, Research Exposure of Students, Student Motivation and Interest, accompanied by Teacher's Mentorship Effectiveness and Research Experience collaborated by the School's Research Culture and Research Policy, were found to statistically predictive quality of student research in life sciences. The study suggests schools should focus on this crucial area to improve student research productivity. This study provided detailed contextualized research management guidelines for research productivity in life sciences.

*Keywords:* Basic Education; Biology; Quality; Research Productivity; Science Education

### **SoGS-SR-03**

#### **Development of Pictorial Cyclopedia of Medicinal Plants in Palawan: A Reference Material for Biology Courses**

*Allan H. Sumandal, PhD-Biology & Arlene L. Tabaquero, PhD*

Contextualized learning materials are essential in enhancing students' scientific literacy. This study aimed to develop a pictorial cyclopedia as a biology reference material by documenting the ethnomedicinal plants used by the Palaw'an indigenous community in Brooke's Point, Palawan. Key informants, including five healers and elders, were identified through snowball sampling. Data collection involved semi-structured interviews, focus group discussions, guided field surveys, and phytochemical screening. Twenty-five (25) medicinal plant species were recorded, with barks being the most widely used plant parts, commonly prepared by decoction and administered orally. Wounds were among the most common health problems cured using the identified plants. These plant species belong to 19 families, largely represented by Euphorbiaceae and Malvaceae. Conservation assessments revealed that most species were classified as Least Concern under IUCN Red List (2024-2) and Other Wildlife Species under DAO 2017:11. However, *Alstonia iwahigensis* Elmer, *Canarium luzonicum* (Blume) A.Gray, and *Swietenia macrophylla* King, were categorized as vulnerable, threatened, and endangered, respectively, emphasizing the need for conservation measures. Differences in the morphological features were observed according to leaf orientation, stem structure, flowers, fruits, and seeds. Trees were the predominant growth form, with some species classified as shrubs, herbs, and vines. These species thrived in secondary forests and riverbanks, typically in moderate altitudes with loamy soil. Phytochemical screening using the test tube method detected alkaloids, flavonoids, cardiac glycosides, saponins, tannins, and terpenoids, with TLC confirming the presence of alkaloids but not of the other constituents. Based on these findings,

pictorial cyclopedia serves as a valuable reference material in various biology courses such as taxonomy, systematics, and ecology. Continuous documentation and scientific validation of other ethnomedicinal plants in Palawan are recommended to expand this educational resource.

*Keywords:* biology education, botanical information, ethnomedicinal uses, Palaw'an, secondary metabolite

#### **SoGS-SR-04**

### **The Interface of the K to 12 Senior High School And BSCE Curricula in the Lens of Teachers and Students: Basis for Curriculum Enhancements**

*Jenette U. Ballitoc, PhD-Mathematics & Melanie G. Gurat, PhD*

This study comprehensively examined the academic performance, course contents, teaching methods, and curriculum merits and limitations of the Senior High School STEM Curriculum and the BSCE Curriculum, as perceived by SHS Teachers, BSCE students, and BSCE faculty. Additionally, this study determined the predictors of tertiary academic performance of BSCE STEM and non-STEM students. These served as input for curriculum enhancement at the Ifugao State University BSCE Program. The descriptive and causal research designs were used among 101 BSCE fourth-year Students through a patterned instrument. In contrast, the descriptive-qualitative research design was used to gather data among six SHS-STEM Teachers and six BSCE Core Faculty through Focus Group Discussions. Using descriptive statistics, multiple linear regression, and inductive analysis, findings revealed that the performance patterns of STEM and NON-STEM students in Senior High School and Civil Engineering programs reveal significant differences, with STEM students excelling in mathematics-intensive and technical subjects. In contrast, NON-STEM students demonstrate strengths in conceptual, theoretical, and kinesthetic learning areas, highlighting the influence of curricular exposure and learning contexts on academic outcomes. On the other hand, the course contents identified in senior high school subjects were covered adequately. In contrast, course contents across several BSCE courses, especially in areas requiring practical application and deeper understanding, were partially taught. The study also highlighted shared practices and unique approaches in the teaching methods employed by teachers, reflecting their distinct educational contexts. Both curricula are designed to equip students with the knowledge and skills required in their respective fields, but they face challenges with pedagogical barriers and academic constraints. Lastly, identified SHS subject performance influences college performance. This implies that early academic performance is a strong determinant of future success. Proposed recommendations were forwarded to the Ifugao State University – BSCE program to ensure a more cohesive and effective preparatory program.

*Keywords:* Civil Engineering Program, Constructivism, Curriculum Enhancements, TABA Model, Teaching Methods, Tertiary Academic Predictors

#### **SoGS-SR-05**

### **Teachers' Competence, Enablers and Challenges in Mathematics Software Utilization towards a Learning and Development Program**

*Edison B. Lopez, PhD-Mathematics & Melanie G. Gurat-PhD*

Mathematics software enhances teaching and learning through interactive experiences. However, the pre-survey revealed that few teachers in the Schools Division Office (SDO) of Nueva Vizcaya integrate such software due to limited Learning and Development (L&D) program support. Hence, this study aimed to design L&D program for mathematics teachers by examining software integration across K to 12 content areas and various lesson

components, alongside assessing teachers' competence. It also identified the facilitating and hindering factors in software use. Employing a mixed-method-explanatory-sequential-research-design, the study gathered quantitative data from 82 mathematics teachers in STEM-offering schools via survey, followed by qualitative data through video-recorded lessons and document reviews. Results showed GeoGebra as the frequently used software integrated in Algebra & Functions and Measurement & Geometry but limited in Discrete Mathematics & Logic and others. Software integration and utilization is frequently seen in presenting new lesson but minimal in review, assessments, and application activities. Although teachers self-rated as competent in software integration due to training, technical support, and student engagement, they find it challenging because of infrastructure limitations, training gaps, and pedagogical alignment issues. An L&D program intended for them focused on four modules: Understanding and Classifying Mathematics Software; Optimizing Software Use Across Lesson Stages; Enhancing Teacher Competence in Mathematics Software; and Addressing Challenges and Leveraging Enablers was designed for adoption of SDO Nueva Vizcaya through the Curriculum Implementation Division. The recommendations focus on building software repository, integrating software into the curriculum, designing lesson plans, and addressing infrastructure and training gaps to support teaching and learning processes.

*Keywords:* Digital divide, GeoGebra, learning and development (L&D) program, technological pedagogical and content knowledge (TPACK), technology integration

## **SoGS-SR-06**

### **Perceptions and Coping Mechanisms of Airline Cabin Crews on Work-Life Balance Practices**

*Julie Faith Sison Bautista, MBA & Mayvelyn S. Covita, PhD*

This study explored the perceptions and coping mechanisms of airline cabin crew on work-life balance practices, focusing on employees based in the United Arab Emirates. The research aimed to determine how cabin crew manage professional demands while maintaining personal well-being in a high-stress, time-pressured environment. Specifically, it sought to identify their perceptions, coping mechanisms, common patterns, and shared strategies related to work-life balance. A qualitative research design was employed using semi-structured questionnaires. Twenty (20) cabin crew participants were selected through purposive sampling. Thematic analysis was conducted to interpret and code the qualitative responses. Data were categorized and analyzed according to recurring ideas, behaviors, and themes shared by the respondents. The findings revealed six core elements of work-life balance practices among cabin crew: self-management, time management, stress management, change management, technology management, and leisure time management. Thematic analysis identified four key patterns across informants: routine-setting, emotional resilience, digital and social support, and rest as recovery. These reflect a shared understanding among cabin crew that work-life balance is not fixed but a dynamic and ongoing process requiring continuous adaptation. Based on these results, the study recommends that airlines support cabin crew through flexible scheduling, access to rest and wellness programs, and improved peer and digital support mechanisms. Organizational policies should shift from reactive to proactive to foster a culture of balance, resilience, and well-being in the aviation sector.

*Keywords:* Airline cabin crew, coping mechanisms, perception, qualitative research, work-life balance

**Capabilities of Digital Mobile Payment: Impacts on Satisfaction and Continuance Intention among MSMEs in the Hospitality and Tourism Industry**

*Corine Joy S. Tapo, MBA & Mayvelyn S. Covita, PhD*

This study highlights the critical role of digital mobile payments in enhancing business operations among MSMEs in the Hospitality and Tourism Industry in Banaue, Ifugao Province, during the last quarter of 2023. The research aimed to evaluate the capabilities of digital mobile payments and their relationships with user satisfaction and continuance intention. A descriptive-correlational design was employed to address the research questions. Fifty-six business owners utilizing digital mobile payments participated in the study, selected through criterion sampling and assessed using a structured instrument. The findings indicate that digital mobile payments provide accurate, adequate, available, complete, concise, standard, relevant, clear, and useful information. Users perceive these systems as safe, secure, functional, responsive, reliable, accessible, convenient, customizable, accurate, easy to navigate, sophisticated, well-structured, and user-friendly. Generally, users reported high satisfaction with these services and a strong intention to continue using them for their businesses. The study observed moderate to high positive correlations between perceived capabilities and satisfaction and a strong positive correlation between satisfaction and continuance intention. As perceived capabilities of digital mobile payments improve, so do satisfaction levels and continuance intention. Challenges related to information quality, service quality, and system quality were noted, and recommendations for MSMEs were provided to address these issues.

*Keywords:* Continuance intention, Gcash, information quality, level of satisfaction, service quality, system quality

SoGS-SR-08

**Foregrounding Learners' Experiences of Peace Education Initiatives in a Private High School: Promoting Non-Violence Practices Through Evidenced-Based Policy Insights**

*Daniel Jr. B. Baguista, MAEd-Educational Administration & Darwin Don M. Dacles, PhD*

The integration of peace education in schools is crucial for fostering a culture of non-violence. This study explores the integration of peace education initiatives at Don Bosco High School, Inc., using combination of quantitative survey administered to 338 randomly sampled Grades 7 to 12 students to assess their views on the level of integration of peace education and open-ended questions to identify the challenges they faced. For the teachers, a focus group discussion (FGD) was conducted with 15 teachers to gather in-depth insights into the challenges encountered in integrating peace education. The findings indicate that both students and teachers recognize the importance of peace education and its positive impact on the school environment. Students reported a great level of integration of peace education across different domains, highlighting areas such as curriculum, instructional content, and extracurricular activities. Despite the high level of integration, challenges such as the need for more resources and continuous professional development for teachers were identified. Teachers emphasized the importance of structured support and ongoing training to sustain the success of peace education initiatives. The study concludes that peace education initiatives at Don Bosco High School, Inc. are highly effective and well-integrated across various domains. The policy insights based on the salient findings recommend that the school continues to enhance teacher training programs, incorporates more structured peace education activities, and strengthens partnerships with external organizations to support and sustain peace education initiatives. Addressing the specific challenges identified by students

and teachers is crucial for ensuring the ongoing success and impact of the peace education program.

*Keywords:* Conflict resolution, empathy building, non-violent communication, quality education, peace, justice and strong institution, and social harmony

## **SoGS-SR-09**

### **Key Stage 1 Teachers' Social-Emotional Learning Knowledge and Instructional Competence: Basis for a Proposed Professional Development Plan**

*Crizza Mae B. Saquing, MAEd- Early Childhood Education & Ma. Cristeta M. Aduca, PhD*

Cognizant of the importance of social-emotional learning (SEL) in the learners' well-being, this descriptive, comparative, and correlational study determined the SEL knowledge and instructional competence levels of the Key Stage 1 teachers in the Schools Division Office of Nueva Vizcaya's Bayombong I and II Districts for School Year 2024-2025. Further, this study statistically compares the level of the teachers' instructional competence in the different SEL domains. It correlates the teachers' levels of knowledge and instructional competence toward developing a professional development plan in the upskilling of Key Stage 1 teachers. The findings reveal that the teachers exhibit a competent level of understanding of SEL concepts and perceive themselves as proficiently demonstrating instructional competence in integrating these across the five SEL domains. Among the domains, teachers need more in-depth professional support in developing social awareness among the learners than the other four domains. Further, their level of SEL knowledge tends to be independent of the teachers' instructional competence level across the domains. Based on these salient findings, a contextualized professional development plan is proposed to equip the key stage 1 teachers with appropriate content and pedagogical approaches in providing learning opportunities related to SEL for early childhood education learners. Further research is recommended to explore the relationship between the teachers' SEL knowledge and instructional competence and to develop a program based on the proposed plan.

*Keywords:* contextualized plan, key stage 1, professional development support, SEL content knowledge, teachers' competence

## **SoGS-SR-10**

### **Parental Practices, Challenges and Needed Support Involving Early Childhood Learners At Home: Towards A Proposed Support for Parent Program**

*April Grace G. Martinez, MAEd- Early Childhood Education & Kevin Marf B. Saquing, PhD*

Recognizing the critical role that parents play in early childhood education, this qualitative study examines the practices, challenges, and support needs of parents in extending learning at home, laying the groundwork for the development of a parent-support program. Specifically, the study focuses on parents of pupils at the Quirino Central Learning Center for the School Year 2023-2024. The findings reveal that parents employ various strategies to support their children's education, including active participation in learning activities, conducting follow-up sessions, using diverse teaching and learning activities, applying reinforcement techniques, and offering appreciation and encouragement. However, they also face significant challenges, such as balancing their work and family responsibilities, creating a conducive learning environment at home, reducing children's screen time, and finding effective ways to motivate their children. Based on the critical role that parents play in supporting early childhood education, a contextualized support program is proposed to equip parents with effective parenting approaches and strategies for providing rich learning

opportunities for their children. Further research is recommended to evaluate the program's effectiveness in other parent communities.

*Keywords:* Home learning, key stage 1, contextualized program, parental involvement, extended support

### **SoGS-SR-11**

#### **Special Needs Education Teachers' Self-Efficacy, Stress, Job Satisfaction, and Job Commitment: A Basis for Professional Development**

*Donato O. Abaya, MAEd-Special Education & Kevin Marf B. Saquing, PhD*

The teaching profession, particularly in Special Education, continues to evolve and demand multifaceted competencies from educators. Special needs education teachers assume not only instructional roles but also intensive emotional labor, coordination with parents, administrative responsibilities, and community engagement. These demands may impact their self-efficacy, stress levels, job satisfaction, and organizational commitment. This study employed a mixed-methods approach to investigate the interrelationships among these four psychological constructs among 23 special needs education teachers in selected elementary schools under the Schools Division of Ifugao. Standardized instruments were adapted, including the Teacher's Self-Efficacy Scale, Wilson Stress Profile for Teachers, Teacher Job Satisfaction Questionnaire, and Teacher Job Commitment Scale. Quantitative data were analyzed using the Statistical Package for the Social Sciences, while qualitative inputs validated the findings. Results indicated generally high levels of self-efficacy, job satisfaction, and job commitment, alongside moderate levels of stress. However, notable issues emerged: low self-efficacy in community engagement, elevated stress related to time management and intrapersonal pressure, physical symptoms of stress, dissatisfaction in recognition and compensation, and relatively lower normative commitment. Interestingly, a positive relationship was observed between stress and job satisfaction, suggesting that teachers may derive a sense of fulfillment even in challenging conditions. The findings imply that while SPED teachers demonstrate resilience and professional dedication, targeted support in the areas of community involvement, workload regulation, and teacher recognition is crucial. Consequently, a professional development program was proposed to address these specific needs and enhance the overall well-being and performance of special education teachers.

*Keywords:* commitment, professional development, special education, stress

### **SoGS-SR-12**

#### **Practices, Challenges and Coping Strategies among Students with Physical Disability in a Higher Educational Institution: Basis for Proposed Measures on Accessibility**

*Jaime C. Andres Jr., MAEd-Special Education & Lorvin M. Adducul, PhD, RGC*

This study aimed to determine the practices, challenges, and coping strategies among students with physical disability in a higher educational institution and to promote measures that enhance the operationalization of accessibility. Guided by the Interpretative Phenomenological Analysis (IPA), the study employed in-depth interviews and thematic analysis to identify patterns and meanings derived from participant narratives. Semi-structured interviews were conducted with students with physical disability. Data were transcribed verbatim, coded, and analyzed using the steps of the IPA approach. Three major themes emerged regarding institutional practices: *the Presence of Physical Accessibility Features, Responsive Faculty and Staff Support, Peer Support, and an Inclusive Social Environment*. Despite these positive practices, participants highlighted persistent barriers

such as *Unsafe and Inaccessible Infrastructure*, *Lack of Total Communication Support*, and *Inadequate Disability Awareness and Sensitivity Training*. In response, students demonstrated resilience through coping strategies grouped into three themes: *Drawing Strength from Others*, *Adapting with Initiative*, and *Reframing Disability*. The findings demonstrate the dual nature of support and struggle faced by students with disabilities in higher educational institutions, reflecting both the advancements and gaps in the implementation of inclusive education. Proposed measures in the study include *enhancing physical infrastructure*, *improving communication accessibility*, *faculty and staff training on disability awareness and sensitivity*, and *institutionalizing disability-inclusive policies and peer support mechanisms*. The results affirmed the idea that legal provisions like Republic Act No. 7277, RA 11650, and Batas Pambansa Blg. Three hundred forty-four are not fully implemented. It is perceived that accessibility is a basic right, not a charitable cause that ensures that students with physical disabilities may fully participate, do well in school, and feel like they are a part of the school community.

*Keywords:* Accessibility, students with physical disabilities, inclusive education, coping strategies, higher education, proposed measures

### **SoGS-SR-13**

#### **Predictive Utility of the Saint Mary's University Career Assessment for Senior High School**

*Florizza Lorraine B. Galamay, MAEd-Guidance and Counseling & John G. Tayaban, PhD*

This study investigated the predictive utility of the Saint Mary's University Career Assessment for Senior High School using archival data of all Grade 11 students in a private senior high school. The findings revealed that there is no significant difference in the aptitude of students when grouped according to sex. However, significant differences were observed based on the type of school, particularly for General Ability, Verbal Aptitude, Spatial Aptitude, and Manual Dexterity where graduates of private schools generally had higher aptitudes compared to public school graduates. Additionally, in relation to track/strand, significant differences in aptitude were found in General Ability, Verbal Aptitude, Numerical Aptitude, Spatial Aptitude, and Perceptual Aptitude. Furthermore, the study indicated no significant difference in the personality of students when grouped according to sex, school type and track/strand. On the other hand, significant differences were observed in the General Weighted Average when grouped by level of honors across different tracks/strands, both for the first and second semesters, as well as overall. Various combinations of aptitudes were significant predictors of GWA both in the first semester, second semester and overall, for Accountancy, Business and Management, Science, Technology, Engineering and Mathematics, and Humanities and Social Sciences strands. These findings suggest that the aptitude component of the Saint Mary's University Career Assessment for Senior High School can be utilized to predict General Weighted Average of students in various tracks/strands, thus providing important information for Career Guidance of incoming senior high school student.

*Keywords:* aptitude, career guidance, student performance, track/strand selection

### **SoGS-SR-14**

#### **Lived Experiences of Resilient Overseas Filipino Workers in Their Career Journey: Towards the Development of Thematic Intervention Module**

*Corazon A. De Jesus, MAEd-Guidance and Counseling & Lorvin M. Adducul, PhD, RGC*

The life journey of Overseas Filipino Workers (OFWs) is a testament to resilience and sacrifice, as they navigate grueling work conditions, cultural barriers, and prolonged separation from

their families, all in pursuit of better opportunities and a brighter future for their loved ones. This study, using a descriptive qualitative research method with personal interviews, was conducted to explore the lived experiences of OFWs concerning work challenges, employment conditions, cultural adaptation, social integration, family impact, personal well-being, coping mechanisms, and prospective initiatives. Findings show that OFWs face demanding work schedules, language barriers, job insecurity, and discrimination, leading to physical and mental stress. Cultural adaptation is crucial but challenging, often causing emotional distance and communication breakdowns with family. Coping mechanisms include regular family communication, community engagement, and support from fellow expatriates. Improving OFWs' experiences requires targeted policies and programs. Moreover, challenges for OFWs in Kuwait include long working hours, physical exhaustion, job insecurity, low pay, language barriers, cultural differences, and discrimination. These challenges impact their well-being, financial stability, and job satisfaction. Addressing these issues requires supportive workplace policies, fair treatment, job security, and reasonable working hours. Consequently, this study proposes an intervention program that supports OFWs from pre-departure to their return to the Philippines, covering support systems, financial empowerment, and career development. It is essential for the Philippine Government, NGOs, and host countries to establish favorable conditions to support OFWs throughout their employment abroad, regardless of their duration of stay.

*Keywords:* Cultural adaptation, expatriates, guidance counseling, filipino migrants, resilience

## **SoGS-SR-15**

### **Junior High School Students' Religious Experiences during the COVID-19 Pandemic: Basis in Determining the Principles and Crafting Activities in Teaching Values Education**

*Ryan D. Nesperos, MAEd-RE & Henry F. Gamboa, PhD*

This phenomenological study explored the religious experiences of Junior High School Students at Dupax del Norte High School during the COVID-19 pandemic, specifically in the Academic Year 2024–2025. Using Focus Group Discussions (FGDs), the study gathered qualitative data on learners' religious activities and analyzed their influence on personal, relational, spiritual, and educational dimensions. Findings revealed that religious practices, such as prayer, Bible study, online worship, youth gatherings, and creative expressions like praise songs, fostered emotional and spiritual resilience amid pandemic challenges. Family engagement in shared worship and prayer strengthened relationships, while virtual religious practices demonstrated learners' adaptability and creativity. Reflective practices like sharing testimonies and scripture meditation provided stability and hope during uncertain times. These activities had notable impacts: (a) personally, they promoted self-awareness, gratitude, and emotional strength; (b) socially, they reinforced family and peer bonds, fostering empathy; (c) spiritually, they enriched learners' faith and connection to God; and (d) educationally, they instilled values such as discipline and perseverance that motivated academic success. Learners stressed the importance of grounding values education in spirituality, inclusivity, respect for diversity, and self-reflection. Teachers, as moral role models, were pivotal in guiding learners. Proposed school-based activities included Bible studies, youth programs, stage plays, and collaborative creative projects, emphasizing respect for diverse beliefs. The study concluded that religious activities and values education are essential for fostering holistic growth, adaptability, and moral development among learners.

*Keywords:* Adaptability, emotional resilience, inclusivity, respect for diversity, quality education, and strong institutions.

## SoGS-SR-16

### **Laboratory Competence, Procedural and Practical Knowledge, and Environmental Management System Compliance: Towards a Responsive Management Framework for Chemistry Laboratory**

*Remedel D. Dela Mines, MAT-Chemistry & Elsa L. Cajucom, PhD*

This research's primary objective was to determine the effectiveness of the imposed laboratory management through the level of laboratory competence and degree of laboratory procedural and practical knowledge of chemistry students, teachers, and laboratory assistants, as well as the environmental management system (EMS) compliance. The study employed a combination of quantitative-descriptive methodology. This utilized a standardized test and survey that involved 179 students, 3 chemistry teachers, and 2 laboratory assistants from selected tertiary schools of SMU with chemistry laboratory courses. The quantitative data collected were analyzed using statistical methods to determine the level of laboratory competence, degree of procedural and practical knowledge, and level of EMS compliance. An interview with the Safety and Pollution Control Officer was also facilitated in addition to 12 students, 3 chemistry teachers, and 2 laboratory assistants. The data collected through observations and interviews were used to validate and provide supplementary information on the findings. Results indicate that while teachers and laboratory assistants generally exhibit higher competency levels, there is a significant knowledge gap among students, particularly in foundational safety and waste management protocols. Statistically, the students' group was highly conforming to EMS, while the teachers/ laboratory assistants' group was moderately conforming. Laboratory procedural and practical knowledge correlates with EMS compliance but not with laboratory competence. Further investigation revealed that all variables of procedural and practical knowledge are linked to EMS compliance. A framework named Responsive Management for Safety and Sustainability (ReMSS) for Chemistry Laboratory was developed to address these gaps, emphasizing enhanced safety education and training, procedural guidelines, and continuous improvement to promote a safer, compliant, and more efficient laboratory environment.

*Keywords:* Environmental management system, hazardous waste disposal, laboratory safety, laboratory management framework, risk management, storage and handling of chemicals

## SoGS-SR-17

### **Mobile App Adoption and the Self-Regulated Learning in Chemistry Instruction: Pathways to Enhanced Engagement and Autonomy in General Chemistry**

*Shenna Mae B. Decoro, MAT-Chemistry & Elsa L. Cajucom, PhD*

This study examined the relationship between mobile application adoption and self-regulated learning (SRL) among senior high school students in General Chemistry. Anchored on Zimmerman's SRL Theory and the Technology Acceptance Model (TAM), it explored how perceived usefulness and ease of use of mobile apps relate to SRL components: goal-setting, self-monitoring, self-reflection, engagement, and self-efficacy. Using a descriptive-correlational design, data were collected from 87 students through a validated survey. Results showed that students found mobile apps highly useful and easy to use. SRL practices were generally high, particularly in goal-setting, monitoring, reflection, and engagement, while self-efficacy scored slightly lower. Pearson correlation revealed significant positive relationships between mobile app adoption and all SRL components, with the strongest link between perceived usefulness and self-efficacy ( $r = .708$ ,  $p < 0.05$ ). These findings informed the development of an Independent Learning Plan (ILP) that integrates mobile-supported

strategies to enhance SRL and engagement in Chemistry. The study highlights the potential of mobile applications to support learner autonomy and recommends their strategic integration into instruction to improve science learning outcomes.

*Keywords:* digital education, independent learning plan, science and technology, self-efficacy, technology integration

## **SoGS-SR-18**

### **Grade 12 Stem Students' Performance in Capacitance and Resistance Using the Flipped Classroom Approach toward Teaching Package Development**

*Crisalyn Uy-Almeniana, MAT-Physics & Dominga C. Valtoribio, PhD*

Innovative teaching methods are essential for enhancing student learning in physics, particularly when tackling complex topics like capacitance and resistance. This study examined the flipped classroom approach as an alternative instructional strategy to improve the performance of Grade 12 STEM students in capacitance and resistance. The research combined quantitative data from pretests and posttests with qualitative insights from student journal entries and interviews, capturing academic outcomes and lived learning experiences. Results showed a noticeable improvement in students' understanding of the key concepts following the integration of the flipped classroom approach. However, several challenges emerged, including difficulties in simplifying complex circuits, limited time for learning activities, struggles with recalling formulas, and a lack of preparedness for independent pre-class study. Despite these challenges, students responded positively to the interactive, student-centered nature of the approach. The study led to the development of a teaching package to assist educators in using the flipped classroom model. Grounded in constructivist learning theories and Bloom's Mastery Learning framework, which further encourages autonomy and builds learners' confidence, helping them take ownership of their educational journey. This research recommends refining foundational instruction in lower grade levels, improving support for conceptual understanding and workload pacing, and encouraging physics teachers to adopt the flipped classroom as a viable alternative for enhancing learning. The study also proposes the use of the teaching package and calls on school administrators to provide adequate training and resources. Curriculum developers are urged to design structured, multimodal materials, while future research is encouraged to explore long-term outcomes and diverse learner profiles to further strengthen the approach's effectiveness.

*Keywords:* Instructional design, mastery learning, social constructivism, cognitive constructivism

## **SoGS-SR-19**

### **Dynamics of Cognitive Engagement in a Physics Classroom**

*Angelika Joyce P. Uhuad, MAT-Physics & Gloria Vicky A. Antonio, MEd*

This study determined the dynamics of cognitive engagement in the Grade 12 STEM Physics II classes at Saint Mary's University during the fourth quarter of School Year 2023-2024. Two Physics teachers were observed during their classes, with ten observations in each class. The researcher took note of the teachers' implementation status of the curriculum standards, learning delivery methods, types of Assessment employed, and the students' level of cognitive engagement during their classes, using two observation tools. A researcher-made tool was used to determine the three teacher variables. At the same time, the ICAP framework of Chi and Wylie (2014), with 18 five-point Likert scale items, was adapted to determine the level of cognitive engagement. It was found that most of the learning competencies were covered after the set timeframe by the Department of Education. It was also found that the most common

teaching strategy used by the teacher was interactive discussion and problem-solving, and the teacher integrated ICT-based instructional materials to a great extent. The most common formative assessment tool was oral recitation, and the most common summative assessment tool was written work, such as quizzes and group work. The results also indicate a high level of cognitive engagement among the Grade 12 students. Based on the results and findings, the Curriculum Standards, Learning Delivery Methods, Assessment, and Student-Teacher Interactions (CLASs) Engagement Framework was developed to increase the level of cognitive engagement among students. The main components of this Framework include (a) Curriculum standards, which consist of teachers' time management and creativity to effectively teach the learning competencies; (b) learning delivery methods, which consist of teaching strategies and effective use of IMs; (c) assessment, that includes both summative, formative, and feedback, and lastly (d) student-teacher interaction, which consists of classroom routines, student participation, and open communication with each other.

*Keywords:* assessment, cognitive engagement, curriculum standards, learning delivery methods, assessment tools

## **SoGS-SR-20**

### **Development and Validation of Physics Comics in Sports**

*Hector L. Maddawat, MAT-Physics & Dominga C. Valtoribio, PhD*

This study explored the development and evaluation of a contextually grounded instructional material, *Physics Comics in Sports* (PCS), which is a printed supplementary learning tool intended for junior high school physics. The research employed a developmental evaluative research design, specifically following a modified analysis-design-develop-implement-evaluate model, with the exclusion of the implementation stage, in crafting four comic stories featuring the least mastered competencies (LMCs) in junior high school physics, in the context of sports, particularly blind sailing, basketball, skateboarding, and car racing. The said material is paired with learning guides that do not only exemplify possible utilization of PCS as an instructional tool in the classroom but show how this narrative-driven material can foster critical thinking, collaboration, and genuine curiosity about how science operates in the world around us, nurturing a classroom culture where scientific knowledge is not only learned but lived. Using the DepEd's quality assurance tool for new print developed materials in validating PCS, results from the validation of experts indicate that despite minor issues related to grammar and typography, these did not significantly impact the overall pedagogical value and integrity of the material, thus, the overall passing remark. Results highlighted that PCS can serve as a reliable and innovative supplementary tool to enhance physics instruction. Given the results, revisions on identified areas of concern, implementation in an actual classroom, and additional cycles of evaluation from experts are highly recommended, in hopes of further strengthening the integrity and educational value of the developed Physics comics in sports.

*Keywords:* contextualized learning, dual coding theory, instructional design, physics education

**Students' Level of Metacognition, Anxiety, and Self-Efficacy as Predictors of Academic Performance in Physics: Basis for Inquiry-Based Instructional Intervention Materials (I<sup>3</sup>M)**

*Rosemarie Q. Servado, MAT-Physics & Dominga C. Valtoribio, PhD*

The Program for International Student Assessment (PISA) 2022 revealed that the Philippines ranked at the bottom four among 64 countries, with an alarming notice described as “weak critical thinking skills,” which became an enormous challenge in the educational sector. This study investigated the relationship among metacognition, physics anxiety, and self-efficacy as predictors of academic performance among the Grade 12 STEM students during the second semester of SY 2023-2024 at Saint Paul University Dumaguete. The study used Explanatory Sequential Mixed Methods Design and purposive sampling. The research gathered data through surveys and one-on-one interviews, which were subsequently analyzed using descriptive-correlational statistics and thematic analysis. The data indicated “High” levels for all non-cognitive variables and falls under the category of moving towards mastery within all identified competencies with a challenging focus on calculations and problem-solving involving electric forces and fields, which required additional practice and effective use of formative assessments. Hence, higher self-efficacy increased the likelihood of performing metacognitive strategies and raised the potential for managing students’ physics-related anxiety, especially anxiety directly tied to courses and laboratory work. The study revealed that metacognition was a significant predictor of academic performance in physics, indicating that as metacognitive skills improved, physics performance increased. The study proposed an Inquiry-based Instructional Intervention Material (I<sup>3</sup>M) based on salient findings and essential domains, namely, integration of learning style, practice through problems, and hands-on instructional materials. The researcher recommends future research on the effectiveness of Inquiry-based Instructional Intervention Material (I<sup>3</sup>M) and its long-term effect in shaping students’ experiences in physics education.

*Keywords:* formative assessment, hands-on instructional material, integration of learning style, non-cognitive factors, and practice through problems

**SoGS-SR-22**

**Challenges and Affective Filters in Learning General Biology in Selected Senior High School STEM Students**

*Jake B. Macarubbo, MAT-Biology & Jason Arnold L. Maslang, LPT, MAT, MBS*

This study aimed to investigate the challenges and affective filters encountered by students in learning General Biology, with the goal of identifying potential interventions to mitigate these difficulties. A total of fifty-one (51) Senior High School students from Delfin Albano Magsaysay Stand-Alone Senior High School participated in the study. Findings indicated that the students experienced moderately low levels of both academic challenges and affective filters in the context of General Biology learning. Statistical analysis further revealed a significant correlation between the levels of challenges and affective filters, suggesting that these two variables are interrelated. However, no significant relationship was found between students' preferred mode of learning and their affective filter levels. These results informed the development of targeted interventions, including a compilation of instructional activities

and learning materials designed to address the identified challenges. Additionally, the study advocates for the implementation of seminar workshops for educators, emphasizing strategies for effectively managing students' affective filters to enhance the teaching and learning process in General Biology.

*Keywords:* Affective filters, challenges, learning material, General Biology, policy brief

### **SoGS-SR-23**

#### **Practices, Challenges, and Level of Sustainability Integration in Junior High School Biology Instruction: A Basis for Pedagogical Exemplars**

*Rubilyn L. Attam, MAT-Biology & Elsa L. Cajucom, PhD*

The escalating challenges posed by climate change, biodiversity loss, and environmental degradation underscore the imperative to integrate sustainability into education particularly at the secondary level. Junior high school biology instruction offers a vital opportunity to cultivate environmental awareness, critical thinking, and responsible citizenship among students. However, according to studies current pedagogical approaches tend to prioritize theoretical content over the practical application of sustainability concepts. This study investigated the extent of sustainability integration in biology instruction across junior high schools in Bayombong, Nueva Vizcaya, focusing on prevailing teaching practices, encountered challenges, and the overall level of integration. Anchored in a quantitative research design, the study employed descriptive statistics to analyze data collected through a validated, researcher-developed survey questionnaire administered to biology teachers. Results indicated a strong commitment among educators to integrate sustainability concepts, yet significant barriers such as curriculum limitations, inadequate instructional resources, and insufficient access to professional development impeded full-scale implementation. Pedagogical practices identified included place-based learning, ecological field activities, and the creative use of recycled materials, although these were inconsistently applied. In response, the study proposed a Pedagogical Exemplar informed by the 7E Instructional Model, emphasizing experiential learning, inquiry-based strategies, and technology-supported instruction. The findings suggest that systemic interventions, curriculum redesign, and sustained institutional support are critical for embedding sustainability education in biology curricula. Future research is recommended to examine the long-term impact of such pedagogical innovations on student competencies, attitudes, and environmental stewardship.

*Keywords:* 7Es, Biology Instruction, Pedagogical Strategies, SDG 4, Sustainability Integration

### **SoGS-SR-24**

#### **Biology Teachers' Literacy and Experiences in Using Artificial Intelligence (AI): Towards AI Integration Training Plan**

*Angelica Mae B. Tabbu, MAT-Biology & Melanie G. Gurat, PhD*

This study investigated senior high school biology instructors' experiences and literacy of artificial intelligence (AI) in private schools in the Isabela Province. The study developed a research-based AI training program based on the findings. A descriptive research design was utilized, involving 14 Biology teachers selected through random sampling from four private schools offering the STEM strand. The researcher gathered data using adapted and modified instruments measuring AI literacy, experiences, and the specific AI tools integrated into teaching General Biology 1 topics. The data was analyzed using thematic analysis and descriptive statistics alongside a case study report. The findings showed that teachers' perceived level of AI literacy was very high in understanding AI concepts, ethical

considerations, and applying AI tools, but applying AI tools had the lowest mean among the three domains. Commonly used tools included Canva and ChatGPT, followed by Copilot, Turnitin, Lesson Planner PH, and Gemini, while others like Grammarly and Quillbot were underutilized. Moreover, the respondents did not mention any specialized AI tools for teaching Biology. Challenges identified were heavy workloads, limited technical support, ethical issues, and technical difficulties. Teachers reported benefits such as innovative teaching strategies, enhanced productivity, and improved content quality. Based on the results, the researcher developed a training plan that aims to enhance the effective use of AI tools in teaching Biology. The plan includes parallel sessions, allowing participants to focus on tools most relevant to their specific needs and interests. To sustain meaningful AI integration in science education, the study recommends ongoing professional development, increased institutional support, and the consistent application of ethical practices in instruction.

*Keywords:* AI proficiency, ethical AI integration, professional development

## **SoGS-SR-25**

### **Knowledge, Experience, and Confidence Levels of BSED General Science Graduates in Performing Basic Biological Laboratory Techniques: Basis for a Training Plan**

*Melissa N. Balaho, MAT-Biology & Analyn A. Guevara, PhD*

Science teachers' competence in laboratory techniques is crucial for effective science education. However, the shift to online classes during Covid-19 pandemic limited laboratory exposure of graduates. This study determined the perceived level of knowledge, experience, and confidence of the Bachelor of Secondary Education (BSEd) Science graduates in performing basic biological laboratory techniques. Utilizing a quantitative, descriptive-correlational design, data were collected from BSED-Science Graduates from selected schools in Nueva Vizcaya through a survey questionnaire. Data were analyzed and presented using frequency, percentage, mean and standard deviation. Findings revealed that while respondents demonstrated proficient theoretical knowledge, their perceived level of experience and confidence were relatively low for most of the lab techniques, except for Aseptic Techniques, where higher competencies was reported. No significant relationship was found between respondents' profiles and perceived level of knowledge, experience, and confidence in performing laboratory techniques using Fisher's exact test. A structured training plan was developed to enhance experience and confidence level of respondents. Results suggest that formal education and employment status did not contribute to the level of laboratory competencies of the respondents. Instead, the lack of hands-on training during online classes emerged as key factor affecting graduates' low level of experience and confidence. Thus, training plan will be submitted to educational institutions for potential adaptation and implementation to address these gaps. Future researchers may explore additional factors affecting laboratory competencies such as availability of facilities, instructor expertise, and challenges faced during the pandemic.

*Keywords:* distance learning outcomes, laboratory instruction, science teachers' laboratory competencies, training intervention

## SoGS-SR-26

### **Self-Efficacy and Attitude of the Senior High School Learners in the Specialized Subjects of Humanities and Social Sciences Strand in Tuao High School**

*Divine Grace Raposas –Rabut, MAT-Social Studies & Christopher Allen S. Marquez, PhD*

Students' self-efficacy and attitudes are crucial in the field of Humanities and Social Sciences (HUMSS). When students approach these disciplines with optimism and a strong belief in their capabilities, they tend to find learning more accessible and enjoyable. This study evaluated the self-efficacy and attitude toward HUMSS-specialized subjects among the Senior High School students in Tuao High School for the school year 2023-2024. It employed the embedded design and assessed four sources of self-efficacy: mastery experience, social persuasion, vicarious experience, physiological and emotional states, and overall attitude levels. It also compared these factors across various student profiles and examined the correlation between self-efficacy and attitudes. Utilizing a modified questionnaire for self-efficacy and the Modified Fennema-Sherman Attitude Scales for attitudes, results showed high self-efficacy and moderately favorable attitudes toward specialized subjects. No significant differences were observed based on sex, birth order, or monthly family income. However, a significant relationship was noted between self-efficacy and attitudes towards these subjects. Further research into the long-term impact of self-efficacy and attitudes can inform educational practices, leading to targeted interventions, personalized teaching methods, and enhanced teacher training, promoting academic and career success.

*Keywords:* Fennema-Sherman, motivation, perspective, self-confidence, self-esteem, sources of self-efficacy

## SoGS-SR-27

### **Understanding the *Bugkalot* Cultural Heritage among Secondary School Teachers in a Philippine DepEd District: Towards Developing Educational Materials on Cultural Heritage**

*Narciso R. Cardenas, MAT-Social Studies & Darwin Don M. Dacles, PhD*

Cultural heritage shapes communities and identities, fostering pride and a sense of responsibility for its preservation. This study employed a quantitative design using a descriptive-comparative method and a survey. It primarily assessed teachers' knowledge of cultural heritage in general, as well as their understanding of the *Bugkalot* people and their tangible and intangible cultural heritage. The findings show a predominance of female educators and a mix of teaching experiences, highlighting the need for culturally relevant resources that cater to both new and experienced teachers, especially *Bugkalot* educators. Additionally, respondents exhibited moderate knowledge of cultural heritage, with gaps in understanding cultural laws, pointing to a need for targeted professional development focused on *Bugkalot* traditions and legal frameworks. Sex, teaching experience, ethnicity, and the type of learning materials used did not significantly affect cultural knowledge, emphasizing the need for universal efforts to improve understanding of intangible heritage across all groups. Ultimately, the study reveals that while secondary school teachers in Nagtipunan, Quirino, possess moderate knowledge of *Bugkalot* cultural heritage—both tangible and intangible—significant gaps remain in their understanding of deeper cultural practices, legal rights, and preservation efforts. This underscores the need for specialized educational resources and professional development to empower educators and strengthen cultural revitalization efforts within the community. A brochure based on the study's findings has been created. It is recommended that authorities review it for distribution to the relevant groups and individuals.

*Keywords:* Community identity, cultural preservation, cultural revitalization, educational

**SoGS-SR-28**

**Fostering Informed and Engaged Citizens: The Case of Civic Education Teachers in the Schools District of Natonin, Mountain Province**

*Gezel Ann B. Umila, MAT-Social Studies & Darwin Don M. Dacles, PhD*

Teaching civic education in rural areas presents formidable challenges as educators navigate obstacles that hinder their efforts to cultivate informed and engaged citizens. A study using qualitative and quantitative approaches examined civic education in select schools in Natonin, Mountain Province. Findings reveal that civic education is essential for shaping citizens who understand their societal roles and responsibilities, emphasizing proactive national development, democratic engagement, and social equity advocacy. Despite challenges like accessibility issues and socio-economic disparities, integrating local traditions and cultural values fosters cultural pride, inclusivity, and respect for diversity. AP and EsP teachers in Natonin demonstrate strong commitment through culturally responsive teaching practices, interactive methods, and real-world connections. However, they face difficulties in facilitating sensitive debates and require enhanced support. The curriculum incorporates local and ethical perspectives with diverse assessment practices, yet logistical issues hinder community linkages. The need for targeted support in professional development and community linkages is highlighted, alongside a call for more performance-based assessments to better prepare students for practical civic engagement. Effective strategies such as integrating technology, sourcing materials, adopting student-centered approaches, leveraging multimedia and ICT tools, community immersion activities, peer mentoring, and real-life examples enhance civic education. The study recommends reviewing, pilot-testing, and utilizing a proposed model to foster and enhance civic education for youth.

*Keywords:* Quality education, partnership, peace, justice, strong institutions, sustainable communities

**SoGS-SR-29**

**Evaluation of Formative Assessments in the Self-Learning Modules (SLMs) for Grade 9 Mathematics**

*Christian Jay A. Bautista, MST-Mathematics & Rommel S. De Gracia, PhD*

This study critically evaluated the formative assessments embedded within the Grade 9 Mathematics Self-Learning Modules (SLMs), classified according to Anderson's Cognitive Process Dimension, and assessed their strengths and weaknesses in promoting student learning. Given the widespread adoption of modular learning, especially in distance education, it is crucial to determine whether these assessments effectively engage the range of cognitive processes necessary for deep mathematical understanding. Using a descriptive research design, the study systematically analyzed formative assessment items from selected SLMs and gathered feedback from both teachers and students to identify strengths and areas for improvement. Findings of the study indicate that the formative assessments predominantly target lower-order thinking skills, such as remembering and understanding. In contrast, only a few items engage higher-order thinking skills, including analyzing, evaluating, and creating, which suggests a limited scope in fostering critical and complex mathematical reasoning. Additionally, qualitative feedback highlighted recurring challenges concerning the clarity of instructions, the limited variety of question types, and the lack of contextual relevance to real-world applications. Both teachers and students expressed that these factors hinder the full potential of formative assessments to support meaningful learning. In response, the study

proposes a set of guidelines aimed at enhancing the design of formative assessments within SLMs. These guidelines emphasize incorporating diverse question formats that stimulate higher-order thinking and ensuring contextualized, clear, and engaging assessment items. By addressing these gaps, the research contributes actionable insights toward improving the effectiveness of formative assessments, ultimately enriching the mathematics learning experience for Grade 9 students in modular and distance education settings.

*Keywords:* Assessment Design, Distance Learning, Formative Assessment, Mathematics Education, Modular Learning, Self-Learning Modules

### **SoGS-SR-30**

#### **Mathematics Teachers' Readiness for the Implementation of the MATATAG Curriculum**

*Maricar C. Baquiran-Daculan, MST-Mathematics & Analyn A. Guevara, PhD*

The MATATAG Curriculum, a recent educational reform in the Philippines, aims to enhance the quality of basic education by streamlining learning competencies and strengthening foundational skills. This study examined the readiness of twelve mathematics teachers in basic education to implement the curriculum, focusing on three key components: pedagogy, assessment, and resources. Using a combination of quantitative and qualitative methods, the study explores teachers' preparedness, challenges, and professional development needs in adapting to new instructional strategies. Findings indicate that while teachers demonstrate strong pedagogical knowledge, gaps exist in collaborative learning, reflective teaching, and project-based assessments. Additionally, resource limitations and inadequate professional development opportunities hinder effective curriculum implementation. The study highlights the necessity of targeted training programs to address misconceptions about assessment methods, optimize digital resource utilization, and enhance teaching strategies. A proposed learning and development program is crafted to support educators and strengthen pedagogical approaches, assessment literacy, and resource integration.

*Keywords:* Assessment, curriculum implementation, digital resources, learning and development, mathematics education, pedagogy

### **SoGS-SR-31**

#### **Collaborative Learning in Algebra: Improving Grade 7 Students' Performance on Algebraic Operations**

*Arlen Joy E. Ramos-Yarcia, MST-Mathematics & Rowena A. Rivera, PhD*

This study investigates the impact of collaborative learning strategies on the performance of Grade 7 students in algebraic operations at Aldersgate College during the academic year 2024–2025. It utilized a pre-experimental one-group pretest and post-test design to assess students' baseline skills and measure improvements after the intervention. Guided by Vygotsky's sociocultural theory and Krashen's affective filter hypothesis, the study integrates collaborative learning techniques such as think-pair-share, numbered heads together, and peer coaching to foster a low-anxiety, interactive, and supportive classroom environment. Sixty-two Grade 7 students participated in the study. Pretests and post-tests were administered to evaluate performance in algebraic operations, while feedback questionnaires were used to gather learners' perceptions of the collaborative approach. Results revealed a statistically significant increase in post-test scores, indicating that collaborative learning positively affected students' mathematical understanding and performance. Based on these results, a proposed practical guide with contextualized collaborative learning plan was

developed to help educators implement collaborative learning in mathematics instruction. The material includes real-life applications and classroom activities tailored to algebra, promoting critical thinking, problem-solving, and teamwork. This study provides valuable insights for teachers, administrators, and future researchers. It highlights the effectiveness of structured group interaction in enhancing algebra performance and encourages the integration of collaborative strategies to build meaningful, student-centered mathematics learning experiences.

*Keywords:* Affective filter hypothesis, numbered heads together, peer coaching, real-life applications, sociocultural theory, think-pair-share

### **SoGS-SR-32**

#### **Grade 11 STEM Students' Attitude, Conceptual Understanding and Procedural Skills in Conic Sections through AI Chatbots**

*Tyrone Marcial V. Lopez, MST-Mathematics & Melanie G. Gurat, PhD*

This study examines the effectiveness of AI chatbots in enhancing attitudes, conceptual understanding, and procedural skills of Grade 11 STEM students in conic sections at Aldersgate College Inc, addressing challenges highlighted by the Philippines' low PISA mathematics scores. Guided by the Technological Pedagogical Content Knowledge (TPACK) framework, a quasi-experimental design was employed to compare pretest and posttest scores from existing teaching methods and AI chatbot-integrated instruction, utilizing the Mathematics and Technology Attitude Scale (MTAS) and teacher-made tests. The results indicated a statistically significant improvement in students' attitudes toward learning mathematics, with a notable shift from skepticism to a more positive perception following the intervention. Performance analysis revealed substantial gains in conceptual understanding and procedural skills, particularly in parabolas and hyperbolas, where students engaged with AI chatbots showed higher achievement levels compared to traditional methods. The findings affirm the potential of AI in transforming mathematics education, suggesting that technology can create more engaging learning environments. Based on these results, it is recommended that educators adopt AI chatbots in their teaching strategies to enhance students' attitudes and learning outcomes in mathematics. Further research should investigate the long-term effects of AI chatbot utilization on student performance and explore optimal integration methods across various subjects. Continuous professional development for teachers in technology integration is also crucial to maximize the educational benefits of AI tools in the classroom.

*Keywords:* Artificial Intelligence (AI), Mathematics and Technology Attitude Scale (MTAS), Paired Samples t-Test, Precalculus, Technological Pedagogical Content Knowledge (TPACK)

### **SoGS-SR-33**

#### **Linking Students' Achievement in Algebra to Their Learning Styles and 21st-Century Fluencies**

*Yvee P. Gutierrez, MST-Mathematics & Dominga C. Valtoribio, PhD*

To support diverse learners, this study explored the link between learning styles, 21st-century fluencies, and Algebra performance among Grade 8 students. Using a descriptive-correlational design, results showed that the dominant learning style was activist, fluency levels were moderate, and Algebra achievement was very satisfactory. No significant link was found between learning styles and performance, but a strong positive relationship existed between 21st-century fluencies and academic achievement. The study suggests that

strengthening fluency skills can enhance student outcomes, and teachers should integrate these into instruction.

*Keywords:* Honey and Mumford learning style, digital fluencies, performance in Algebra

#### **SoGS-SR-34**

### **Junior High School Mathematics Teachers' Tool For and Level of Technology Integration in Five Learning Environments**

*Frezer A. Barsicula Jr., MST-Mathematics & Gerome H. Bautista*

The integration of technology in education is crucial for enhancing student learning, improving teacher instruction, and increasing educational accessibility, making it a cornerstone of modern learning environments. Recognizing this significance, Saint Mary's University high school teachers have participated in seminars and training sessions on utilizing various technologies. This study employed a quantitative-descriptive approach to explore the tools, levels, and challenges of technology integration among six (6) junior high school (JHS) mathematics teachers at Saint Mary's University. Data were collected using the Checklist of ICT Tools Used, the Technology Integration Matrix, and open-ended questions. Findings revealed that all six teachers incorporated tools such as word processors, spreadsheet applications, presentation software, concept mapping/graphic organizers, instructional computer games, and laptops into their mathematics lessons. The study highlighted a predominance of entry to adoption levels of technology integration in active, collaborative, constructive, authentic, and goal-oriented learning environments, with transformation levels observed in all environments except goal-oriented ones. Challenges faced by teachers included unreliable internet connections and insufficient time for preparing instructional materials, limiting their ability to integrate technology fully. To address these issues and enhance technology integration, an in-service training program is proposed.

*Keywords:* Educational technology, Goal-oriented learning environment, Mathematics education, Teacher professional development

#### **SoGS-SR-35**

### **Flipped Classroom Instructional Model: Performance and Experiences of Grade 10 Students in Geometry Lessons**

*Romulo B. Agustin Jr., MST-Mathematics & Dominga C. Valtoribio, PhD*

This study examined how Grade 10 Geometry students at Sta. Isabel National High School experienced learning through the flipped classroom instructional model. Both descriptive-quantitative and descriptive-qualitative techniques were used to gather the necessary data. Using Colaizzi's technique, themes were identified from the participants' responses and selected outputs during the Focus Group Discussion (FGD). Five themes were categorized into two groups: a) the participants' lived experiences and b) the challenges they faced. The study found that the flipped classroom method could be effectively applied in geometry classes, particularly when teaching circles. The participants' difficulties were primarily related to technology, such as internet connections and devices. The participants' diverse experiences contributed to the better application of this strategy. The pretest and post-test results showed a highly significant difference in favor of the post-test, suggesting that the flipped classroom enhanced the students' performance. The results served as a basis for crafting materials on

how to better use the Flipped Classroom Instructional Model, which mathematics teachers may use.

*Keywords:* Differentiated Learning, collaborative learning, educational technology, Colaizzi's technique

### **SoGS-SR-36**

#### **Relationship between Senior High School Mathematics Teachers' Competencies and Their Teaching Anxiety: Basis for Professional Development Program**

*Joseph Mark A. Natividad, MST-Mathematics & Dominga C. Valtoribio, PhD*

Mathematics education is essential for developing analytical and problem-solving skills, yet mathematics teaching anxiety continues to hinder teacher effectiveness and confidence. This study explored the relationship between senior high school mathematics teachers' competencies and their teaching anxiety in public schools in Ilagan, Isabela. Using a descriptive-correlational design, teacher competencies were assessed with the IPCRF, and teaching anxiety was measured with the MTAS. Results showed that most teachers were rated as "Role Model" in competency and reported low teaching anxiety, particularly regarding curriculum demands and instructional flexibility. A negative correlation was found between teacher competency and anxiety, suggesting that higher competency reduces anxiety. With these, a professional development program was proposed to enhance technological and pedagogical knowledge, anxiety management, mentorship, and institutional support. The study emphasizes the need for continuous professional development and suggests further research into other factors affecting teacher competency and student outcomes.

*Keywords:* Curriculum Development, Pedagogical Content Knowledge, Social Cognitive Theory, Teachers' Self-Efficacy, Technology Integration

### **SoGS-SR-37**

#### **Predictors of Statistical Literacy among Teacher Education Graduate Students**

*Melanie Aban-Serquiña, MST-Mathematics & Melanie G. Gurat, PhD*

Statistical literacy is critical for educators because it allows them to evaluate data effectively, make educated decisions, and create data-driven learning environments. In a world where data impacts educational policy and classroom practices, providing teachers with good statistical reasoning abilities ensures that they can critically evaluate study findings and use statistical principles effectively. The research evaluated teacher-education graduate students' statistical literacy together with research literacy and AI literacy profiles for the academic year 2024-2025. The research used descriptive and inferential statistics for statistical literacy assessment while examining research literacy dimensions, including awareness, attitude, skills, and use, as well as AI literacy dimensions with affective, behavioral, cognitive, and ethical aspects, and determined substantial statistical literacy predictors. The research used descriptive-predictive methods for analyzing literacy levels and predicting important literacy through multiple linear regression. Graduate students within the Master of Arts in Teaching (MAT), Master of Arts in Education (MAED), and Master of Science in Teaching (MST) programs at Saint Mary's University formed the respondents sample, which consisted of 42 students. The study findings demonstrate that students excel at descriptive statistics but struggle with inferential reasoning. Student performance on research literacy tests demonstrates average accuracy, but they require improvement in their ability to execute and share research, while AI literacy assessments reveal positive attitudes combined with challenges in advanced engagement along ethical duties. The results demonstrate no

meaningful effect of research literacy or AI literacy on statistical literacy, which shows that basic numerical skills, together with teaching methods and educational planning, dominate statistical understanding development. The research demonstrates the vital importance of using active learning techniques with statistical software tools and real-world examples to overcome statistical thinking deficits. Programs that teach AI literacy within research training will give future educators better abilities for data-driven decision-making. New research directions should determine extra predictors alongside using sophisticated statistical modeling methods to optimize teacher education instruction.

*Keywords:* AI Literacy, Data-driven Decision Making, Multiple Linear Regression, Research Literacy, Statistical Modeling

## **SoGS-SR-38**

### **Construction of Flood Control Structure in Brgy. Macate, Bambang, Nueva Vizcaya**

*Marvin Ryan C. Ferrer, MECE & Engr. Jefrie T. Alindayu, RMP, MSCE*

Flooding remains one of the most destructive natural disasters, causing extensive damage to infrastructure, property, and livelihoods while posing significant health risks. Effective flood control infrastructure plays a vital role in mitigating these impacts, particularly in vulnerable and flood-prone communities. This study focuses on the Flood Control Project in Brgy. Macate, Bambang, Nueva Vizcaya, which serves as a critical intervention to enhance the region's resilience against riverine flooding. By addressing the challenges posed by frequent flooding, the project aims to safeguard lives, improve quality of life, and support sustainable development in the area. The project, initially contracted for ₱58,163,603.67, saw an increase to ₱59,400,000.00 due to a variation order. It commenced on February 14, 2023, with an initial duration of 208 calendar days. However, frequent rainfall, tropical storms, and project plan modifications necessitated a 49-day extension, revising the completion date to October 28, 2023. Despite these challenges, the project was completed within the adjusted timeline, avoiding liquidated damages. The scope of the project included obtaining necessary approvals, securing permits, and procuring materials. Following a bidding process initiated on December 15, 2022, the Bids and Awards Committee (BAC) selected M.R. Vargas Construction Corporation as the Single Calculated Bidder. A pre-construction conference ensured alignment among stakeholders on the project's objectives and execution strategies. Construction activities comprised mobilization, site clearing, excavation, rubble concrete revetment construction, embankment backfilling, and the installation of reinforced concrete pipes, gabions, and mattresses. The project's primary objectives were to enhance flood mitigation, stabilize riverbanks, and protect infrastructure and property from flooding. Additionally, it aimed to improve residents' quality of life, stimulate local economic development, and mitigate the health risks associated with waterborne diseases. The successful completion of the project met these objectives, strengthening the community's resilience to future flood events and fostering a safer, more sustainable environment. This study underscores the critical importance of flood control infrastructure in mitigating natural disasters and promoting sustainable development in flood-prone areas.

*Keywords:* Flood control, Brgy. Macate, cost, contractor, objectives, mitigating

**Construction of Bagabag District Hospital Dietary, Laundry and Ward Building**

*Engr. Giovanni L. Daran, MECE & Engr. Rod Kline M. Perpetua, MECE*

The “Construction of Bagabag District Hospital (BDH) Dietary, Laundry, and Ward Building” aims to improve healthcare accessibility in Baretbet, Bagabag, Nueva Vizcaya by establishing a 25-bed capacity hospital. This initiative seeks to alleviate patient congestion in major health facilities, including the Region II Trauma and Medical Center and Nueva Vizcaya Provincial Hospital, while generating medical and administrative employment opportunities for residents. The project was implemented by the Provincial Local Government Unit of Nueva Vizcaya under the supervision of the Provincial Engineering Office and was funded through a loan from the Land Bank of the Philippines. A budget of ₱57,000,000.00 was allocated for Phase I, covering the construction of a two-storey hospital building with dimensions of 42.0m by 16.75m, including slope protection works. The scope included architectural, structural, electrical, and plumbing works, as well as the installation of a public information billboard. The project was completed within 606 days; however, its goal of easing congestion remains unrealized due to its nonoperational status. While the hospital structure is finished, further phases are required to ensure full functionality. The study recommends comprehensive soil and site investigations, early coordination between planning and construction divisions for vertical expansion, timely processing of building permits to comply with local regulations, and strict adherence to the project schedule to prevent negative slippage. These measures are essential for optimizing hospital operations and fulfilling its intended purpose as a healthcare facility for the province.

*Keywords:* Healthcare facility, medical and administrative services, public information, and site investigation

**SoGS-SR-40**

**Construction of Ocapon Small Irrigation Project (Diversion Works, Water Tanks, Cable Pipeline, Pipelines and Access Road) in Villaverde, Nueva Vizcaya**

*Engr. Maureen Cherry Dee C. Valdez, MECE & Engr. Rod Kline M. Perpetua, MECE*

This research paper presents the development and implementation of the Ocapon Small Irrigation Project in Barangay Ocapon, Villaverde, Nueva Vizcaya. With a contract cost of 45 million pesos funded under the General Appropriations Act of 2022, the project involved the construction of a diversion dam, 14 concrete water tanks, 1 cable pipeline, pipelines, and an access road. Designed to irrigate approximately 96 hectares of farmland, the system includes two main pipelines totaling 5,680 meters, three lateral pipelines spanning 2,360 meters, and 2,500 meters access road. The project began on March 14, 2022, with an original contract duration of 210 calendar days and an expected completion date of October 10, 2022. However, due to inclement weather, there were six revisions to the contract duration. The revised completion date was set for May 24, 2023, but the project experienced an additional delay of 23 calendar days. The final completion date was June 15, 2023, resulting in a total contract duration of 458 calendar days. The project was divided into two contract packages. Schedule 1, undertaken by a sole bidder, covered all civil works, while Schedule 2, handled by a different contractor, involved the supply and delivery of distribution pipelines. The project was designed to address water scarcity and improve agricultural productivity in response to the challenges of climate change. By securing a reliable water supply for rice and high-value crops, it seeks to boost output, generate employment, and increase farmers’ income. It also aligns with the strategic objectives of the National Irrigation Administration and the Local Government Unit of Nueva Vizcaya, positioning the initiative as a model for sustainable irrigation practices and a contributor to regional food security.

*Keywords:* Diversion dam, Ocapon Small Irrigation Project, pipeline, water tanks, water supply

#### **SoGS-SR-41**

### **Rehabilitation and Construction of 745-Meter Trapezoidal Concrete Canal Lining and Appurtenant Structures in Nueva Vizcaya Bagabag Irrigation System**

*Engr. Eunice Pristeen D. Espejo, MECE & Engr. Jefrie T. Alindayu, MSCE*

This paper presents the rehabilitation and construction of a 745-meter trapezoidal concrete canal lining and appurtenant structures in the Nueva Vizcaya Bagabag Irrigation System (NVBIS), spanning from Sta. 0+635 to Sta. 1+447.50. Implemented under the 2024 Modernization of National Irrigation Systems (NIS) Program, the project was divided into two contract packages procured through competitive bidding. It aimed to address significant water losses caused by seepage, percolation, and low irrigation efficiency in the existing earth canal. A feasibility study supported the upgrade to reinforced concrete lining to improve conveyance capacity, minimize water loss, and enhance the structural integrity of the system. During implementation, some proposed canal structures were deleted and the funds were redirected toward the construction of rubble masonry works to protect the irrigation system against erosion and other external threats, reflecting a shift in priorities to ensure long-term sustainability. The project was completed within the 390-day contract duration, with Package 1 completed on October 11, 2024, and Package 2 on April 3, 2025, resulting in notable improvements in irrigation service delivery and system efficiency. As a result, 2,539 farmers benefited, and 2,647 hectares of agricultural land in Solano and Bagabag received more reliable and efficient irrigation. The project aligns with the goals of the National Irrigation Administration (NIA) under Republic Act No. 8435, also known as the Agriculture and Fisheries Modernization Act (AFMA), by contributing to increased agricultural productivity and promoting climate-resilient irrigation infrastructure.

*Keywords:* agricultural productivity, competitive bidding, concrete canal lining, National Irrigation Administration, rehabilitation, seepage

#### **SoGS-SR-42**

### **The Construction of Diversion Dam and Canal Lining For Paoac Barobbob Communal Irrigation System in Bayombong, Nueva Vizcaya**

*Engr. Charlie O. Agnol, MECE & Engr. Jefrie T. Alindayu, MSCE*

The rehabilitation of the Paoac Barobbob Communal Irrigation System in La-Torre, Bayombong, Nueva Vizcaya, plays a critical role in ensuring sustainable agricultural productivity and improving the livelihoods of 258 farmers within the La Vista Magcasama (Expanded) Agrarian Reform Community (ARC). This system, originally constructed through community bayanihan efforts in the late 1960s, serves a firm-up service area of 334.294 hectares and comprises six dams: Regadio, Cabanayan, Bayag, Paulo, Bacani, and Gandillas. Funded under the CARP-IC of the National Irrigation Administration, the project's rehabilitation included the construction of Paulo Diversion Dam, its main canal, and the main canals of Bacani Dam 1 and Gandillas Dam. The construction, carried out from March 21 to December 21, 2022, spanned 275 calendar days and involved CHB canal lining, canal structures, and the diversion dam. The total programmed cost amounted to Php 12,760,000.00, distributed among three contractors: EPN Builders & Developers (Php 4,466,843.14), D.A. Cadelina Construction (Php 4,436,868.60), and Edwin Erwin Sison

Construction (Php 2,487,915.90). Despite minor challenges encountered during implementation, adjustments were made to ensure successful project delivery. The rehabilitated irrigation system now strengthens agricultural infrastructure, secures water availability, and contributes to the overall economic resilience of the farming community.

*Keywords:* Comprehensive Agrarian Reform Program - Irrigation Component (CARP – IC), Diversion dam, Communal Irrigation System (CIS), canal lining, canal structures

### **SoGS-SR-43**

#### **Preventive Maintenance of Tertiary Roads in Echague-Jones, Isabela and Maddela, Quirino**

*Engr. Jaylord Mhar M. Flores, MECE & Engr. Rod Kline M. Perpetua, MECE*

This paper examines the implementation and outcomes of the *Project Asset Preservation Program – Preventive Maintenance* along the Villa Norte–Panang section of the Echague–Jones–Maddela Road in Maddela, Quirino Province. The project, managed by the Department of Public Works and Highways–Quirino District Engineering Office, was designed to improve the mobility of agricultural products, tourism access, and daily travel efficiency for local workers and farmers. Funded under the 2022 General Appropriations Act with a budget of Php 30.18 million, the contract was awarded to APD Construction following a single calculated bid. Using project documentation and progress reports, the study employed a descriptive research approach to assess project implementation, timeline adjustments, and overall impact. Key instruments included engineering records, field observations, and stakeholder interviews. Originally scheduled for 103 calendar days starting February 7, 2022, the project experienced two variation orders that extended the duration to 133 days, with final completion on June 21, 2022. The completed work included a 1.232-kilometer asphalt overlay with a 6.70-meter-wide carriageway, rehabilitation of a previously damaged section, a concrete-lined drainage canal, and installation of reflectorized pavement markings. Findings indicate that the project met its goals despite timeline adjustments, contributing to enhanced road safety and transportation efficiency. The study concludes that proactive planning and adaptive implementation can significantly improve infrastructure outcomes. These findings may serve as a reference for future infrastructure projects under similar geographic and economic conditions.

**Navigating Secularization: A Fresh Approach to a New Phase of Evangelizing the Christian Youth in Veritatis Gaudium (The Joy of Truth)**

*Henry F. Gamboa, PhD, Atty. Epifanio Delbert G. Galima III, Edjohn B. Antonino, Benito D. Buyacco Jr., Bryan Benedict D. Olarte, & Rev. Fr. Victor M. Abijay*

Using a quantitative-qualitative research design, this study examined the centrality of religiosity among youth and its interaction with the increasing influence of secularization in educational settings. Focusing on the salience of religion and religious identity, the research stratified respondents by sex, age, and school type to explore levels of religiosity and determine whether significant differences exist across personal profiles and domains. The findings revealed a consistently high level of religiosity across all demographics, with no significant differences observed. This suggests that faith and religious identity remain central to the lives of young people, regardless of their background. The study also analyzed the role of legal frameworks and ecclesial documents—particularly *Veritatis Gaudium*—in safeguarding religious expression and shaping spiritually formative environments in schools. Despite strong religiosity, students face various secular challenges, including digital distractions, academic challenges, peer influence, and inconsistent institutional support. In response, the study recommends implementing school-parish-based activity such as Digital Discipleship: Shaping Critical Minds and Gospel-Based Values in Youth (A School-Parish-Based Youth Encounter Project) strengthening legal and spiritual literacy, and promoting inclusive, interreligious dialogue within schools. These interventions align with the Church's call for a renewed and contextualized evangelization of the youth in this digital and pluralistic era.

*Keywords:* evangelization, religiosity, *Veritatis Gaudium*, secularization, religious identity, legal frameworks, Christian formation, education, digital era

**Empowering Barangays: Harnessing Data for Effective Decision Making through Enterprise Resource Planning Systems**

*Adonis V. Garces, PhD, DIT, Milagros S. Constantino, MIT, & Reynaldo A. Valdez*

Barangays are the smallest administrative divisions in the Philippines, and they are crucial in local governance and community development. However, due to limited access to technological tools and data management systems, many barangays need help managing their resources, delivering public services, and making data-driven decisions. In response to these challenges, there is a growing recognition of the potential for Information and Communication Technology (ICT) solutions, particularly Enterprise Resource Planning (ERP) systems, to empower barangays and enhance their decision-making capabilities. This study explores the potential of ERP systems in improving decision-making at the barangay level by leveraging data effectively. ERP systems offer integrated solutions for managing various aspects of barangay operations, including finance, human resources, facilities and equipment, peace and order, and service delivery. By centralizing data and automating processes, ERP systems can streamline administrative tasks, improve transparency, and enable more informed decision-making among barangay officials. The data analytics module of the system enables real-time, interactive access, analysis, and visualization of resident profiles, senior citizen monitoring, collection and revenue monitoring, peace and order monitoring, the status of barangay facilities and equipment, and service delivery monitoring. The researcher will use developmental research to develop the system using Rapid Application Development (RAD) in agile project management. The study will be piloted in Barangay Ibung, Villaverde, Nueva Vizcaya. The overall system's compliance is evaluated using the International Organization for

Standardization (ISO) 25010 Software Quality Standards. Implementing ERP systems at the Barangay level can lead to more efficient resource management, better service delivery, and improved decision-making processes. These efforts can ultimately contribute to building sustainable, resilient, and inclusive communities, which are central to the objectives of SDG 11. By enhancing the decision-making capabilities of Barangays through data-driven approaches, the research can contribute to the advancement of sustainable development within urban and local contexts.

*Keyword:* ERP Systems, data-driven decision making, data analytics

### **SoGS-FR-03**

#### **Bridging Cultures, Expanding Horizons: Surfacing the Impact of Inbound and Outbound Mobility on Learning - Onward to a Robust Institutional Plan**

*Clara M. Gonzales, PhD, Martin Manuel, Gerome Bautista, Katelijne Demeyere, Elly Verstraete, & Jocelyn P. Carag, PhD*

Internationalization (IZN) is one of the growing parameters in gauging the societal impact of higher education institutions globally. This paradigm shift is a response to the constant and unpredictable change that has confronted humanity in recent years, challenging the traditional role of education in this rapidly changing world. The impact of education is put in the spotlight, and education experts and administrators are urged to reinvent strategic goals and curricula so that learners gain the global competencies necessary to navigate globally. Many of the world's leading policymakers have recognized the critical role of internationalization in achieving quality and excellence through education. The United Nations incorporated partnerships (SDG 17) in its sustainable development goals by 2030. The World University Rankings for Innovation (WURI) integrated student mobility as a category in measuring a university's real impact on society and industry. Hence, internationalization implies that higher education institutions establish relevant partnerships with external networks to foster an atmosphere of openness, participate in various mobility programs that allow their students and staff to appreciate and respect cultural differences, and collaborate with partners in solving humanity's global problems. For IZN to be effective, the participants must be impacted first. There is a dearth of research on this topic. Hence, this study examined participants' lived experiences in inbound and outbound mobility at Saint Mary's University (SMU). Using the phenomenological approach as a research design, the study explored the experiences of the participants during the mobility programs, how their experience impacted them, how they made use of their immersion in giving meaning to their education, and how they utilized their learnings in making an impact on the University and society. Based on the results, internationalization contributed to the global mobility participants' personal and professional growth. The results add value to the University's goal of leveling up its culture of quality and excellence through internationalization.

*Keywords:* internationalization, global mobilities, lived experiences, partnerships

### **SoGS-FR-04**

#### **Harnessing Generative AI for Innovative Instruction, Research and Extension: Towards Crafting of Policies for Responsible Use**

*Melanie G. Gurat, PhD, Ivonny Lorvin M. Adducul, John Octavious S. Palina, PhD, John Tayaban, PhD, Ma. Nympha B. Joaquin, PhD, & Crist John M. Pastor, PhD*

This study explored the types of generative AI tools being used, how widely they are applied, their responsible use, and their impact on learning and critical thinking. A mixed-method

approach was used, with data collected from faculty and students through researcher-designed Likert Scale questionnaires. The study also reviewed existing AI policies from participating universities. Results showed that students and teachers are using generative AI tools, with ChatGPT (OpenAI) being the most popular. However, their use is still limited, showing that AI is not yet fully integrated into academic activities. Respondents showed good awareness of ethical use, but there is still a need to protect academic integrity and ensure equal access. AI was found to moderately support learning and critical thinking, but it should be used alongside traditional learning methods. Many universities already have AI policies, highlighting the need for Saint Mary's University to create its own clear and accessible policy. A proposed AI policy with nine key sections was created, based on the university's Catholic values, promoting ethical growth, innovation, and responsible use. The study recommends that Saint Mary's University evaluate and adopt this policy to meet the needs of students, teachers, and staff. This will help guide fair and ethical AI use, maintain academic standards, support real learning, and provide regular training and updates.

*Keywords:* Academic integrity, authorship, AI-giarism, critical thinking, extent of use

## **SoGS-FR-05**

### **Cultivating Purpose-Driven Leaders from Campus to Communities: Strategies for Advocacy Formation and Implementation**

*Kenneth L. Maslang, PhD, Darwin Don M. Dacles, PhD, Jestony B. Amtar, Ms. Maybelle Blossom A. Dumlao – Sevilena, & Emerlene Jane Galanta-Martinez*

In an era where social responsibility and advocacy are increasingly valued, the transition of student leaders from campus to community spheres is of paramount importance. Higher education institutions play a crucial role in shaping these leaders, extending their influence beyond academic boundaries. This study delves into the mechanisms through which such institutions nurture purpose-driven leaders and facilitate the implementation of their advocacy initiatives in wider society. Likewise, this endeavors to explore the nexus between higher education and leadership advocacy, with a focus on empowering students to drive meaningful change. By elucidating the processes involved in advocacy formation and implementation, the study aims to equip both students and institutions with actionable strategies for effective leadership development and community engagement. Utilizing a combination of qualitative and quantitative approaches, interviews with student leaders and stakeholders in higher education, alongside quantitative surveys to gather comprehensive insights will be performed. Anticipated outcomes include the identification of key factors influencing the successful cultivation of purpose-driven leaders, as well as the elucidation of barriers encountered in advocacy efforts. Furthermore, the research aims to offer practical recommendations for higher education institutions to enhance their support for student-led advocacy initiatives. By shedding light on the dynamics of advocacy formation and implementation among student leaders, this research holds significant implications for both academia and society at large. Ultimately, it seeks to foster a culture of social responsibility within higher education and empower students to become catalysts for positive change in their communities.

*Keywords:* HEI leadership development, student leaders, civic life, responsible citizenship

**Shades of Green: Unveiling Community Engagement in Barangay Greening Program**

*Felipe V. Nantes, Jr., PhD, Alona C. Costales, Haydee D. James, PhD, & Elizabeth V. Lumidao*

This study examined community engagement in the Barangay Greening Program, addressing the gap in understanding how demographic factors influence participation in grassroots environmental initiatives. It aims to explore residents' attitudes, perceptions, and levels of involvement while identifying key factors that affect engagement. Qualitative and quantitative approaches were used, combining surveys, interviews, and observations to gather data. Findings reveal that while community awareness of the program is high, active participation remains limited. Middle-aged individuals, females, and those with higher educational attainment and socio-economic status show greater involvement, particularly in leadership and planning roles. In contrast, younger and lower-income individuals exhibit minimal engagement. Statistical analysis indicates significant differences in community participation based on age and education, with education and economic status emerging as the strongest predictors of involvement. The study also highlighted key factors that influence engagement, including awareness and education, socio-economic conditions, community leadership, past experiences with environmental disasters, and perceived incentives. Based on these findings, the study recommends targeted interventions such as age and gender responsive programs, leadership trainings, incentive-driven activities, and expanded environmental education campaigns. Strengthening these areas can bridge the gap between awareness and action, fostering active participation. Ultimately, the study provides valuable insights for policymakers, environmental advocates, and local leaders in crafting more inclusive and effective strategies to sustain grassroots environmental efforts and build community resilience against climate change.

*Keywords:* Climate change, environmental stewardship, environmental sustainability, green initiatives

**Research Unit: School of Accountancy and Business**

**Research Coordinator: Angela C. Garra**

**Panel of Reviewers:**

| <b>Area of Specialization</b>                                               | <b>Name of Faculty</b>                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accountancy</b>                                                          | Elnora V. Adalem, CPA, MBA<br>Sheryl A. Baria, BSA<br>Angela C. Garra, MBA<br>Ma. Concepcion T. Jalijali, CPA, MBA<br>Jeanette R. Mania, CPA<br>Veronica C. Maramba, CPA<br>Emerson G. Ramos, CPA<br>John Lindy R. Soriano, CPA<br>Dorilyn C. Tiongson, MBA, JD<br>Francis Leo C. Tugab, CPA<br>Jonathan P. Vergara, MAEd<br>Harrison T. Villanueva, PhD |
| <b>Business Administration, Office Administration, and Entrepreneurship</b> | Sheryl A. Baria, BSA<br>Erlinda T. España, PhD<br>Loreta V. Garlitos, MBA<br>Angela C. Garra, MBA<br>Monaloufel Rosario F. Jasmin, LPT, MSBA<br>Alexa B. Las-ang, BSOA<br>Claire L. Guinoman, MBA<br>Sherween Jerry Paul V. Saquing, LPT, MAEd, MBA, JD<br>Rodora P. Tipay, MBA, IMPA<br>Harrison T. Villanueva, PhD                                     |
| <b>Hospitality and Tourism Management</b>                                   | Windell Marie M. Colobong, BSTM<br>Mayvelyn S. Covita, PhD<br>George Rawson A. Guiab, BSHRM<br>John Michael C. Ibarra, MSHRM<br>Jesus Ana Maria F. Jacalne, BSHRM<br>Aileen P. Lamson, BSHRM<br>Sherween Jerry Paul V. Saquing, LPT, MAEd, MBA, JD<br>Mark Ian J. Soriano, MSTM                                                                          |
| <b>Guest Panel</b>                                                          | Flomilyn B. Dela Cruz, BSC,<br>Senior Trade and Industry Development Specialist-<br>Department of Trade & Industry<br>Aira Leigh Suguitan-Rumbaua, - Faculty, NVSU,<br>BS- Tourism, MSTM Ongoing                                                                                                                                                         |

**SAB-SR-01**

## **Assessing the Inventory Management Practices of Milktea Shops in Nueva Vizcaya**

*Abando, Aedine Joy I., Agnahe, Strawberry Winona T., Sarinia, Crystel Kaye G., Testado, Ady F. Timmangao Jr. Barris T., & Soriano, John Lindy R., CPA*

A successful firm in the food and beverage sector must have an efficient inventory management system in place in order to be profitable. It is of critical importance in maintaining the availability of goods, reducing costs, and maximizing the level of pleasure experienced by customers. In recent years, milktea businesses have seen tremendous popularity growth, notably in a number of communities located within the province of Nueva Vizcaya. This study aimed to determine the inventory management practices of milktea shops in selected municipalities of Nueva Vizcaya, namely Solano and Bayombong where most of the registered opened milktea shops are located, for the second semester S.Y. 2024 - 2025. Descriptive-quantitative research design was used to determine the profile variables of the milktea shops owners or managers in their level of inventory management practices in selected municipalities of Nueva Vizcaya in terms of ordering, receiving, storing, delivery, packaging and spoilage. The owners/managers of milktea shop businesses in selected municipalities of Nueva Vizcaya were assessed in terms of their inventory management practices because they have direct control and direct supervision over their inventory. A survey questionnaire was used to get information from a total of 16 selected respondents who are the managers or owners of the milktea shops. The study revealed that milktea shops in Nueva Vizcaya exhibit strong inventory management practices across various dimensions, ensuring product quality and operational efficiency. These practices are consistent across different business profiles, highlighting a standardized approach within the industry.

*Keywords:* delivery, ordering, packaging, receiving, storing, spoilage

### **SAB-SR-02**

## **The Implementation of Ease of Paying Taxes (EOPT) Act and Its Impact among Micro and Small Businesses in a Moderately Developed Province**

*Rosal, Adrienne B., Corpuz, Frances Louise T., Palolan, Arianne Marie L., Sadueste, Christia Jelome F., Villanueva, Cristina E., & Mania, Jeanette R., CPA*

The Ease of Paying Taxes (EOPT) Act intends to streamline the tax administration in the Philippines by digitalizing processes, enhancing convenience, and promoting compliance for both individual and corporate taxpayers. This qualitative study aimed to assess the implementation of the Act and its impact on micro and small businesses operating in Nueva Vizcaya. This research intended to obtain extensive insights regarding the changes introduced by the Act, such as its implications on tax filing and payment processes, location of these operations, and overall economic impact on firms. Additionally, the study sought to identify challenges faced by businesses in adapting to the new requirements and assessed the Act's adherence to the principles of a good tax. Data were collected through in-depth interviews with six participants from Nueva Vizcaya, including business owners and bookkeepers. Thematic analysis was used to identify common themes in the data. The results highlight that with most businesses embracing BIR's online systems like EFPS and eBIRForms, the Act has reduced time burdens and improved tax compliance. However, while filing became easier, payment methods largely remained unchanged, with many sticking to traditional bank payments. Several key themes emerged including: (1) Transition from Manual to Electronic Filing, (2) Convenience and Efficiency of Online Payments, (3) Efficiency in terms of time and money, (4) Digital Divide and Technological Barriers, among others. The study also found that the Act aligns with the four standards of a good tax system by being sufficient, convenient, and fair, but requires improvement in certain areas to ensure economic efficiency. The study's findings

highlight the significant shift among micro and small businesses in their tax filing and payment practices, underscoring the economic advantages as well as the challenges encountered by taxpayers which was brought about by the Act's implementation. This research will serve as a foundation for the further development of the EOPT's implementation and the thorough integration of online systems.

*Keywords:* Digital divide, digitalizing, eBIRForms, EFPS, electronic filing, tax administration, tax compliance, tax law, tax system

### **SAB-SR-03**

#### **The Professional Judgment Practiced In the Implementation of PFRS 15 in the Construction Industry in Cagayan Valley**

*Baytec, Meryl Mae J., Dispo, Rochelle May A., Daroni, Feona Faith D., Piñera, Kreazzelle Mei M., Teaño, Queyzelle L. & Soriano, John Lindy R., CPA*

This study evaluates the post-implementation effects of PFRS 15 on construction firms in the Cagayan Valley, with a particular focus on the professional judgment exercised in the key components of the five-step revenue recognition model. The research aims to explore how these judgments influence the recognition, measurement, presentation, and disclosure of financial statements. In gathering primary data, the proponents developed a self-made interview questionnaire directed toward accountants from construction firms holding valid PCAB licenses. A qualitative research methodology was employed, with data analyzed through thematic and content analyses to identify key patterns and insights. The study's findings underscore the significant role of professional judgment in the implementation of PFRS 15. In particular, contract modifications are commonly evaluated based on set thresholds, external market conditions, and practical approaches. When addressing performance obligations, accountants consider the nature of the contract, the interrelatedness of services, and the customer perspective. In the allocation of the transaction price, the same depends on both the cost-plus margin and residual approaches as determined by the reliability of cost data and the contract's complexity. Notably, the study found that accountants do not apply professional judgment in determining the transfer of control. Additionally, results reveal a preference for recognizing revenue over time, with construction firms equally favoring input and output methods. The shift in revenue disclosures, driven by new PFRS 15 guidelines, has enhanced transparency but also created significant compliance challenges.

*Keywords:* Accounting standard, revenue recognition, construction firms, contracts, Philippine Contractors Accreditation Board (PCAB)

### **SAB-SR-04**

#### **Perceived Information Technology (IT) Knowledge and Competence of Graduating Accountancy Students and Entry-Level Accountants Based On International Education Standard 2 and International Education Practice Statement 2**

Information technology (IT) plays a vital role in the accounting profession. As IT continues to evolve, accounting professionals need to develop and enhance their IT skills to keep pace with industry demands. Likewise, accounting education holds the responsibility of aligning the IT knowledge and competence of accounting students with the requirements set by the International Education Standard 2 (IES 2) and the International Education Paper Statement 2 (IEPS 2). IES 2 defines four levels of IT proficiency: foundation, intermediate, advanced, and mastery, with intermediate being the minimum requirement for aspiring professional accountants. IEPS 2 further specifies four areas of IT knowledge and competence as a framework to assess the IES 2 standards: general IT knowledge, IT control knowledge, IT control competence, and the role of IT user, manager, evaluator, or designer. This study aimed to assess the perceived levels of IT knowledge and competence among graduating accounting students and entry-level accountants based on IES 2 and IEPS 2, specifically evaluating whether the accounting curriculum effectively prepares students for entry-level accounting roles. The study used quantitative data from 100 respondents, including 50 graduating accountancy students from A.Y. 2023-2024 and 50 BSA graduates from A.Y. 2020-2023. Purposive random sampling was employed to select the respondents based on inclusion and exclusion criteria. The independent t-test was used for data analysis. Results revealed that the perceived level of IT proficiency for graduating accountancy students based on the standards set by IES 2 and IEPS 2 was overall advanced, except for the IT user, manager, evaluator, or designer, which was at an intermediate level. Meanwhile, the perceived level of IT proficiency of entry-level accountants was overall advanced. Therefore, the perceived level of IT knowledge and competence of entry-level accountants is significantly higher than the perceived level of IT knowledge and competence of graduating BSA students across the four variables. Based on these findings, the study concludes that Saint Mary's University's accounting curriculum aligns with the IES 2 standards, indicating that graduating students are well-prepared for entry-level roles in accounting.

*Keywords:* Accounting curriculum IT alignment, entry-level accountant IT skills, IT proficiency standards in accounting, IT skills assessment in accounting graduates, IT in accounting education

## **SAB-SR-05**

### **Preparedness of Accountancy Students for the Licensure Examination**

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Being prepared gives students more confidence in taking and passing the licensure examination. With the low passing rate of LECPA, examinees are concerned about how they will prepare for the licensure examination. This study aimed to investigate the perceived preparedness of accounting students, particularly in terms of factors affecting their financial, mental, environmental, and academic preparedness. A survey questionnaire was distributed to all fourth-year accountancy students at Saint Mary's University during the A.Y 2023-2024. The collected data was analyzed using the following statistical tools: frequency counts, mean, standard deviation and percentage through Statistical Package for Social Science (SPSS). The responses showed that financial preparedness, mental preparedness, environmental preparedness and academic preparedness received a weighted means of 2.94, 3.10, 2.75, and 2.20, respectively. With the result of overall mean of 2.75, Accountancy students are moderately prepared in taking the licensure examination. It further revealed that they are moderately prepared in financial, mental and environmental aspects. However, in academic preparedness, they are slightly prepared. Additionally, the perceived preparedness of accounting students regarding sex using the Mann-Whitney U test showed that there is a

significant difference. In contrast, the rest of the profile variables—family size and monthly income—showed no significance at all.

*Keywords:* Academic preparedness, accounting, financial preparedness, environmental preparedness, mental preparedness

## **SAB-SR-06**

### **Reliance of Rural Banks on the 5Cs of Credit and Their Loan Performance**

*Balawo, Stephanie P. Buhong, Desheryh E. Palino, Jasper P., & Mania, Jeanette R., CPA*

The 5Cs of credit are fundamental principles lenders use to assess borrowers' creditworthiness. This study aimed to determine rural banks' extent of reliance on the 5Cs of credit, their loan performance and if a significant relationship exists between these variables. The proponents used a structured questionnaire in gathering data using descriptive correlational research design. The data was analyzed using the following statistical tools: mean, standard deviation and Spearman Rho through IBM SPSS, while ratio analysis was used to measure loan performance. Findings revealed that rural banks have very high reliance on capacity, capital, collateral and character while high reliance was observed for condition. Furthermore, it was found that rural banks in Solano, Nueva Vizcaya have exceeded the industry standard ratio for NPL indicating higher exposure to credit risk. The LLP ratio differed among banks, with some falling short of the minimum threshold for a favorable LLP ratio. This indicates that even though banks heavily emphasize the 5Cs, the loan performance did not align with the anticipated correlation. Lastly, it was revealed that no significant relationship can be established between the variables despite the moderate to high level of correlation. This could be a result of limited respondents and highly homogenous responses. For further studies, the researchers recommend that rural banks incorporate diverse financial indicators and improve collection practices, and for the future researchers to increase the number of respondents, expand the questionnaire and to explore qualitative research methods.

*Keywords:* Borrowings, financial performance, LLP ratio, lending criteria, NPL ratio

## **SAB-SR-07**

### **Level of Knowledge and Technical Skills on SAP Business One of Accountancy and Management Accounting Students in Saint Mary's University**

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Accounting software is essential for modern accounting professionals. SAP Business One, a leading accounting software, is particularly crucial for equipping accounting students with practical skills. The study aimed to determine the level of knowledge and technical skills on SAP Business One of Accountancy and Management Accounting students in Saint Mary's University. The researchers used a Likert-scale and a multiple-choice questionnaire to gather data using descriptive-comparative research design. Findings show that there is a significant gap between perceived and actual knowledge and technical skills in SAP Business One. While students believed they had a strong understanding of the system's expenditure, revenue, and inventory cycles, their performance indicated otherwise. The disparity can be attributed to several factors. Students accustomed to hands-on tasks may have struggled with the multiple-choice format. Insufficient time during the assessment may have hindered students' ability to apply their knowledge and skills. The Likert questionnaire contained with limited number of questions focused on self-reported confidence, while the multiple-choice questions contained

a large number of questions and were more detailed, requiring step-by-step understanding in navigating SAP Business One. To address these challenges, it is recommended that the students actively practice using SAP Business One, utilize the user manual, and stay updated on industry developments. Faculty and staff should also prioritize hands-on learning experiences by increasing lab sessions, developing simulations, integrating projects, and ensure the curriculum remains relevant. Lastly, the future researchers can consider incorporating a diverse range of assessment methods, administer assessments closer to course completion, and use a combination of assessment methods such Likert scale questions and computer task-based assessments to obtain a comprehensive evaluation of students' knowledge and skills.

*Keywords:* accounting software, accounting information system, expenditure cycle, revenue cycle, inventory cycle

## **SAB-SR-08**

### **Document Scanning of the Supervisors' Evaluation and Accounting Interns' Self-Evaluation: A Study of the On-The-Job Program of the Department of Accountancy Of Saint Mary's University**

*Cariazo, Renalyn A., Guillao, Thrixia Fea B., Jacinto, Mary Sunshine S., Lamagon, Shyla Rashel M., & Tiongson, Dorilyn C., JD*

This study focuses on the document scanning of accounting interns' self-evaluations and supervisor evaluations within the On-the-Job Training (OJT) program of the Department of Accountancy at Saint Mary's University. The primary objectives are to identify challenges faced by accounting interns, enhance the OJT program for future interns, and pinpoint areas for improvement. The research encompasses 114 accounting interns from the 4th year BSA and BSMA programs during the academic year 2022-2023. Utilizing a descriptive research design, the study employs a mixed-method approach, incorporating both qualitative and quantitative data. By evaluating the frequency of exposure and performance levels as assessed by supervisors, the research aims to contribute valuable insights that can inform enhancements to the OJT program, ensuring a better quality and more enriching experience for future accounting interns. The significant findings indicate that accounting interns demonstrated excellence in their performance, as evaluated by supervisors during their On-the-Job Training (OJT). This commendable performance reflects a strong commitment to professionalism, teamwork, and ethical behavior, which align closely with the organizational standards of the School of Accountancy and Business at Saint Mary's University. In the intern's evaluation, exposure of the accounting interns in the applied bookkeeping skills was found to be frequently applied. This suggests that while the interns exhibited a commendable and regular utilization of their bookkeeping abilities, there is room for growth to attain a more advanced or very often applied level. Additionally, the interns demonstrated proficient performance in applying accounting and auditing skills during their internship.

*Keywords:* Auditing, bookkeeping, experience, exposure, performance

## **SAB-SR-09**

### **Perceived Level of Competency and Performance of Sangguniang Kabataan Treasurers in Selected First-Class Municipalities in Nueva Vizcaya**

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This study examines the correlation between the perceived level of competency and performance of Sangguniang Kabataan (SK) treasurers and compares both to their demographic profiles. The research focused on selected first-class municipalities in Nueva Vizcaya—Bambang, Bayombong, and Solano—where barangays were randomly selected using a spin-the-wheel method. SK treasurers assessed their own competency through a researcher-prepared questionnaire, while their performance was evaluated by their respective SK chairpersons and barangay captains. A mixed-method approach was employed using descriptive, comparative, and correlational research designs. Results indicated that while the majority of respondents held college-level education and had completed at least one basic certification, they generally lacked advanced training or formal specialization in treasury management. They demonstrated basic proficiency in financial tasks such as issuing receipts and disbursing funds but encountered significant challenges in preparing financial statements, adhering to audit requirements, and submitting timely reports. Evaluations from SK chairpersons and barangay captains generally affirmed these trends, highlighting issues related to documentation, reporting delays, and coordination with oversight bodies. These findings underscore the critical need for more targeted, experience-based training programs, along with mentorship initiatives, to enhance the technical skills and accountability of youth treasurers in local governance.

*Keywords:* Accountability, compliance audit, financial governance, local governance, transparency, youth leaders

## **SAB-SR-10**

### **Cost Transformation Practices and Challenges of Homegrown Restaurants**

*Balasya, Jericho Voltaire B., Monterial, Wendy R., Pinaroc, Gilbert C. Viray, Dorina Mikaela G., Yumiaco, Clyde F., & Soriano, John Lindy R., CPA*

Cost transformation refers to a strategic initiative aimed at enhancing an organization's cost efficiency and value delivery. This research investigated how homegrown restaurants in Nueva Vizcaya apply cost transformation practices, the challenges encountered, and the improvements they propose. Adopting a descriptive-comparative design, the study integrated both quantitative and qualitative approaches. Data were obtained from 95 homegrown restaurant owners and managers using a structured questionnaire that included both closed-ended and open-ended items. Quantitative responses were processed using statistical methods, while qualitative data were examined through thematic analysis to identify recurring insights and experiences. Results indicated that the adoption of cost transformation strategies is moderate across the sector. Regardless of whether a restaurant focused on cost leadership or product differentiation, common challenges emerged, such as fluctuating raw material prices, customer retention difficulties, inefficiencies in operations, energy-related expenses, competition, and staff development issues. Statistical analysis showed no significant difference in the level of implementation between the two strategic orientations. To address these challenges, cost leadership restaurants are advised to refine their cost control measures, streamline supplier relations, and reduce waste. Meanwhile, differentiation-focused restaurants should prioritize customer experience, consistent menu innovation, and workforce capability enhancement. The study further recommends that academic institutions incorporate practical, case-driven learning in areas like cost control and supplier negotiation. Government assistance through training, tax support, and infrastructure improvements is also encouraged. For future studies, a deeper exploration of hybrid strategies and the use of qualitative methods is suggested to uncover richer insights into strategic decision-making.

*Keywords:* Competitiveness, operational efficiency, product differentiation, resource utilization, waste reduction

## **SAB-SR-11**

## **Employees' Perception on the Implementation of Internal Controls in Selected Local Government Units in Nueva Vizcaya**

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This quantitative study investigated employee perceptions on the implementation of internal controls within selected Local Government Units (LGUs) in Nueva Vizcaya during the first semester of Academic Year 2024-2025. Employing a descriptive research design, the study surveyed a purposive sample of thirty (30) department heads with at least five years of service from first-class and fifth-class municipalities. A self-administered questionnaire, adapted from existing research, assessed employee perceptions across the five components of the Committee of Sponsoring Organizations (COSO) framework: control environment, control activities, information and communication, risk assessment, and monitoring activities. Data showed no significant differences in perceptions based on employee demographics. These findings indicate that while LGUs have a generally positive internal control framework, targeted interventions are needed to improve specific control activities, formalize conduct standards, and significantly strengthen risk assessment capabilities, especially concerning risk registers, overall assessment capacity, and physical security measures, to enhance overall The primary purpose of the study conducted was to assess the perception of employees on the Implementation of Internal Controls of Selected Local Government Units In Nueva Vizcaya

*Keywords:* COSO framework, employee perceptions, public administration, accountability, transparency, organizational performance

### **SAB-SR-12**

## **Financial Performance of Multi-Purpose Cooperatives As Moderated By Marketing Mix Strategies**

*Gumiran, Nimfa N., Hupguidan, Gaudencia O., Pale, Myra L., Sibayan, Czarina Althea N., Taguiling, Joline P., & Tugab, Francis Leo C., CPA*

A cooperative firm is a unique entity owned and controlled by its members, who utilize its services and products. This study determines the financial performance of multi-purpose cooperatives in Nueva Vizcaya during 2021-2022, focusing on how marketing mix strategies influence this performance. Employing a descriptive-correlational method, the researchers utilized both quantitative and qualitative approaches to assess the implementation of marketing strategies and financial outcomes. Spearman's rho correlation was applied to explore the relationship between the marketing mix defined by the 7Ps (Product, Price, Place, Promotion, People, Process, Physical evidence) and financial performance indicators such as profitability, liquidity, and solvency ratios.

The findings indicate that cooperatives demonstrated a high level of marketing strategy implementation. Financial performance varied significantly across cooperatives, with specific elements of the marketing mix particularly price, promotion, and process showing notable impacts on financial metrics like interest coverage ratio and debt ratios. Recommendations for enhancing marketing effectiveness include continuous product quality improvements, regular pricing strategy evaluations, and robust customer care initiatives. Additionally, cooperatives should focus on improving profitability through effective cost management and enhancing liquidity by achieving a balanced current ratio. Addressing solvency concerns by optimizing debt-to-equity ratios is also crucial for strengthening financial stability and ensuring long-term sustainability while mitigating risks. Overall, the study underscores the

intricate connections between marketing strategies and financial outcomes in multi-purpose cooperatives.

*Keywords:* Liquidity Ratio, Profitability Ratio, Solvency Ratio

### **SAB-SR-13**

#### **The Success Story of a Cut Flower Grower in Kayapa, Nueva Vizcaya: A Qualitative Review of Its Contributory Factors**

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This study examined the success story of a cut flower grower in Kayapa, Nueva Vizcaya, Philippines. The researchers aimed to understand the factors contributing to the grower's success by focusing on their operational, marketing, and financial practices. Using a qualitative case study approach, the researchers conducted an indepth interview with the experienced grower. The findings reveal that the grower's success is built on a blend of traditional farming techniques and modern efficiencies. The study also aimed to determine the problems encountered by the cut flower grower in these areas and understand the contributory factors that have led to their success. In their operations, the grower categorizes flowers based on their needs and blends mechanization with manual labor, demonstrating innovative problem-solving and sustainable practices for marketing, the grower targets specific markets, emphasizes quality to command higher prices, and cultivates strong customer relationships to overcome logistical challenges. This customer-centric approach has helped the grower sustain sales and expand their reach. Financially, the grower avoids debt, keeps expenses simple, and invests strategically, showcasing resilience and adaptability in the face of market fluctuations and natural disasters. The grower's highlights the importance of adaptability, customer focus, and disciplined financial management as key drivers of success in the cut flower industry. This research provides valuable insights for farmers, businesses, researchers to enhance productivity, profitability, and competitiveness in the cut flower sector, ultimately benefiting local communities.

*Keywords:* Adaptability, financial practices, marketing, operational, traditional farming techniques

### **SAB-SR-14**

#### **Total Quality Management Practices of Bakery Businesses in Nueva Vizcaya as Perceived By the Employees**

*Bayag, Michaela Angel A., Espiritu, Carmela Rose C., Ramel, Ryvele Anne L., Tomas, Romelda B., Wania, John Cedrick P., & Villanueva, Harrison T., PhD*

Baking has become a sizable industry in the Philippines, offering more business and employment opportunities (Business World, 2018). However, some challenges are hindering this market's expansion, including the high cost of raw materials, uncontrolled competitors' rivalry, and changing preferences of customers (6Wresearch, 2023). Therefore, this awareness has encouraged the researchers to determine the profile of bakery businesses, the level of extent of their total quality management practices in Nueva Vizcaya as perceived by the employees, and the relationship of the extent of Total quality management practices when grouped according to their profile using Pearson's r-correlation test. The researchers used descriptive correlational design. The findings showed that most of the bakery businesses in Nueva Vizcaya are operating for 3 to 6 years as of 2024 and have 2 to 5 employees working for them. On the other hand, the extent of total quality management practices of the bakery businesses in Nueva Vizcaya is great. Meanwhile, there is a significant relationship between

the supplier management of the bakery businesses and their years of operation. Adopting bakery businesses' total quality management practices has an impact or relation to their years of operation.

*Keywords:* Adoption, financial performance, success, supplier management, years of operation

### **SAB-SR-15**

#### **The Use of Management Accounting Strategies as a Tool for Decision-Making in Higher Educational Institutions**

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Higher Educational Institutions (HEIs) face various challenges in decision-making that can impact their organizational performance. Overcoming these challenges requires institutions to adapt and make use of tools and strategies to not only preserve their current relevance but also foster future growth. Management accounting strategies, which involve the deliberate, planned use of accounting techniques, tools, and approaches for decision-making and organizational performance, play a crucial role in assisting higher educational institutions' decision-making by providing relevant financial and non-financial information. This study aimed to examine the extent of use of management accounting strategies as a tool for decision-making in higher educational institutions, the extent to which management accounting strategies have helped management in decision-making, and the contingent factors that affect its use. The study employed a descriptive-comparative-correlational approach to answer the extent use of management accounting strategies (MAS) and determine if there is a significant difference among the profile variables and if there is a significant relationship among the contingent factors. Research findings indicate that HEIs in Nueva Vizcaya employ management accounting strategies (MAS); however, the extent of their utilization appears to be moderate, as some selectively use costing systems. The results of the profile variables were not significant when it comes to the use of management accounting strategies (MAS) and there was a very high extent to which management accounting strategies have helped management in decision-making. There is also of management accounting strategies (MAS) and contingent factors such as market competition, qualified internal accountants, management participation, and organizational technology. The study, just like past studies, encountered a limitation in terms of the number of respondents, which may have implications for the generalizability of the findings. To achieve satisfying results in future studies, there is a clear recommendation to increase the number of respondents, ensuring a more comprehensive and representative understanding of management accounting strategies (MAS) within HEIs in Nueva Vizcaya. Overall, there is a positive result in the use of management accounting strategies (MAS) by HEIs. Nevertheless, there is still a need to enhance its use by maximizing its complete implementation.

*Keywords:* Contingent factors, extent of use, organizational performance

### **SAB-SR-16**

#### **Total Quality Management Implementation and Challenges Encountered By Creative Businesses in Nueva Vizcaya**

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Total Quality Management is an essential component in a business's planning process, not just for major enterprises, but also for micro and small businesses like creative industries. By integrating TQM principles into their strategic planning, businesses may make sound choices to improve the quality of their products and ensure that resources are efficiently allocated. This study focuses on identifying the total quality management of creative businesses in Nueva Vizcaya. Both quantitative and qualitative approach and the survey method of collecting data were used whereas the questionnaire was administered through face-to-face. The result has established a total of 19 available creative businesses in Nueva Vizcaya that operates for less than ten years employing two employees that offers runo and other products like baki, sarukang, takkab, and lampshade having an initial capital of above 3,000. The study has demonstrated that Nueva Vizcaya's owners of creative businesses believe that the key principles were significantly applied to the business. Furthermore, the principle of leadership involvement is the only significant distinction when grouped by products offered, but the other principles show no significant difference when grouped according to profile. Most of the issues encountered were financial stability and resource management, process efficiency and quality improvement, supply chain management, employee management and training, and external influences affecting production. The study's recommendations addressed these difficulties. The study's overall findings will be used to develop recommendations to solve the issues encountered by present creative businesses in Nueva Vizcaya.

*Keywords:* Capitalization, Handicrafts, Leadership Involvement, MSME's, Quality Improvement, Supplier Relationships

## **SAB-SR-17**

### **Factors Influencing the Use of e-Wallet as a Payment Method of Selected College Students in Saint Mary's University**

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The research aimed to explore the factors influencing the use of e-wallets among selected college students at Saint Mary's University, specifically those from the School of Accountancy and Business. The study employed purposive sampling and focused on six key factors: perceived usefulness, perceived ease of use, lifestyle compatibility, facility condition, and security and trust. The research design incorporated both quantitative and qualitative methods. Data was gathered from a total of 115 questionnaires collected from a targeted sample of 279 students. The data was analyzed using frequency distributions, the KruskalWallis test, and the Mann-Whitney test. The results indicated a significant trend towards e-wallet usage among 21-year-old female students of business administration, major in finance. Furthermore, cellphones were identified as convenient and effective means to use e-wallet services. The most dominant and well-known e-wallet service providers is G-cash. This insight is valuable for ewallet service providers as it can guide them in tailoring their strategies to encourage further adoption of e-wallets among this demographic, who are known to be tech-savvy. The study contributes to the understanding of digital finance adoption among college students and provides actionable insights for e-wallet service providers.

*Keywords:* Cashless transaction, e-payment, e-wallet, e-banking, unified theory of acceptance

### **SAB-SR-18**

#### **Factors Affecting Spending Behavior of Teacher Education Students of a Private Higher Educational Institution in Nueva Vizcaya**

*Bocal, Matt Denver A., Cajimat, Caryl Mae Allyson L., Layug Jr, Arciel L., & Garra, Angela C. MBA*

This study determined the level of effects of factors affecting the spending behavior of education students at Saint Mary's University, Bayombong, Nueva Vizcaya. The factors examined were attitude and lifestyle. The respondents were 96 students enrolled in the Bachelor of Elementary Education and Bachelor of Secondary Education programs. Data were gathered through a survey. The study found that the majority of respondents were female, and most were second year students taking Bachelor of Secondary Education major in English, with a weekly allowance ranging from 1,000 to 1,500 pesos. The students' attitude and lifestyle were found to have a high effect on their spending behavior. In addition, the findings revealed that weekly allowance had a significant relationship with lifestyle. The main challenge identified in spending behavior was impulsive buying. The students recommended implementing tracking and monitoring of expenses. Other recommendations that emerged from the findings were addressed to students, instructors, parents, and future researchers.

*Keywords:* Attitude, financial management, lifestyle

### **SAB-SR-19**

#### **Sustainable Supply Chain Management Practices and Challenges of the Coffee Industry in Nueva Vizcaya: A Case Study**

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The coffee industry significantly contributes to the livelihood of farmers in the Philippines, including those in Kasibu, Nueva Vizcaya. However, it faces critical sustainability challenges such as soil degradation, poor farming practices, limited market access, and inefficient logistics, which hinder long-term supply chain growth. This study explored the sustainable supply chain management (SSCM) practices and challenges encountered by coffee industry players in Kasibu, focusing on six (6) key areas: sustainable farming, environmental management, supply chain operations, reverse logistics, marketing, and corporate social responsibility (CSR). A qualitative descriptive case study design was employed. Data were gathered through structured interviews with sixteen validated participants, including farmers, producers, processors, middlemen, and end-consumers. The interview questions were developed by the researchers and validated by the panelists, adviser-promoter, and research coordinator. Thematic analysis revealed that many stakeholders are implementing sustainable practices such as organic farming, composting, rainwater collection, and the use of eco-friendly packaging. Despite this, they face internal barriers like insufficient funding, outdated equipment, and lack of training, as well as external challenges including poor infrastructure and limited institutional support. The study concludes that while there is strong potential for sustainability in Kasibu's coffee industry, enhanced collaboration, capacity building, and

increased government and private sector support are essential to improving supply chain efficiency and competitiveness.

*Keywords:* organic farming, logistics, value chain, and environmental management

## **SAB-SR-20**

### **A Look at the Supply Chain Management of Citrus Wine in Nueva Vizcaya: The Citrus Capital of the Philippines**

*Duran, Edleya Graceille N., Bag-ay, Mysiadel S., Hilario, Mary Ann T., Aniwer, Andrian A., Favila, Vanessa Mylle B., & Villanueva, Harrison T., PhD*

Citrus wine can refer to white wine with citrus flavors or wine made from citrus fruits. Supply chain management (SCM) manages the movement of goods and services, which covers all activities that transform raw materials into finished products. The researchers aim to document the supply chain management activities of citrus wine and the challenges of key players in the supply chain of Malabing Literacy Organization, Inc. (MALOI), along with the recommendations to address their challenges. The qualitative descriptive design of the study used the case study approach. The study revealed that fertilizer application, pest, and disease control, and using quality seeds add value to citrus fruits. MALOI's citrus wine is made using an exclusive recipe with no chemical formulas, making it all natural. It has undergone various wine tests and is made following the rules for fair trade and global market safety. Processors typically bottle, cork, and label the wines. They use the freezer for storing citrus fruits and a wine rack for citrus wines. The middlemen occasionally deliver the wines using Capitol's service car or a minibus. They distribute wines to sub-consignment outlets, government entities, and at clients' homes in Bayombong, Kasibu, and Solano areas. The middlemen extensively promote citrus wine through Facebook, quality referrals, and trade events. Currently, the biggest problem of the key players is the fermentation of citrus wine. At the same time, the researchers believe that the fundamental issue stems from each members' lack of full cooperation in various aspects of the supply chain. Hence, teamwork and a pleasant attitude at work are highly encouraged, and a comprehensive examination of fermentation conditions to perfect the wine fermentation stage allows them to produce high-quality citrus wines for the market more efficiently.

*Keywords:* Supply chain management (SCM), farming, processing, testing, packaging, warehousing, transportation, distribution, marketing, citrus, citrus wine

## **SAB-SR-21**

### **Service Quality and Customer Satisfaction of a Milk Tea Store in Bayombong, Nueva Vizcaya**

*Ferrer, Jim Lougiee D., Gulapan, Jon Emmanuel T., Coloma, Marianne Kaethe V., Domingo, Marianne Mae A., Reyes, Janelle Marie G., & Garra, Angela C., MBA*

Service quality and customer satisfaction are significant aspects of the business since a company's ability to expand relies heavily on its ability to retain clients through customer service and satisfaction. This study utilized a descriptive correlation research design to determine the level of service quality and customer satisfaction of a milk tea store in Bayombong, Nueva Vizcaya. The respondents were the actual customers of the establishment. The study showed that the milk tea store provides good quality, and customers are satisfied. Furthermore, a positive and significant relationship exists between service quality and customer satisfaction.

*Keywords:* Assurance, empathy, environment, personnel service, reliability, responsiveness, service, tangibility, tangible products, value

### **SAB-SR-22**

#### **Determinants of Fast-Food Consumption and Challenges Encountered Among School Of Accountancy and Business Students in a Private Higher Educational Institution**

*Jester C. Bautista, Rachelle D. Ambatali, Isaiah Joshua C. Cantor, Ryan Arc D. Nayahangan, Alyana A. Palmenco & Harrison T. Villanueva, PhD*

This study examined the determinants and challenges of fast-food consumption among students from the School of Accountancy and Business at a private higher education institution. Using a descriptive-correlational research model, a validated survey was conducted with 277 students, supported by thematic analysis of qualitative data for insights. Findings indicate that psychological factors (motivation, perceived convenience), social influences (peer support, family recommendations), personal characteristics (age, lifestyle, economic status, personality), and cultural elements (values, social class) moderately impact consumption. Additionally, financial constraints, time limitations, and health concerns shape students' fast-food choices. Understanding these determinants is crucial for marketers and business owners seeking to align their offerings with student preferences while promoting sustainable choices. Recommendations include offering affordable and nutritious menu options, leveraging social media marketing, and raising awareness about fast-food effects. Businesses can incorporate behavioral insights—such as nudging strategies—to encourage healthier consumption without restricting choice. These findings provide actionable strategies to meet student needs while fostering more sustainable fast-food habits.

*Keywords:* Consumer behavior, cultural factor, determinants of fast-food consumption, personal factor, psychological factor, social factor

### **SAB-SR-23**

#### **Records Management Practices and Challenges of a Higher Education Institution in Nueva Vizcaya**

*Sheleena Joy B. Peren, Angelyn F. Bandao, Alina Rose L. Briones, Aira Joi L. Suguitan, Shiela Mae B. Tumacder, & Roy B. Lumidao, MBA*

The study explored the practices and challenges experienced in records management at Higher Education Institutions in Nueva Vizcaya. It adopted the quantitative-qualitative explanatory sequential research design method, where non-academic personnel in tertiary positions employed in higher education institutions served as respondents to the study. This research used a questionnaire that determined the practices in maintaining effective records management and an open-ended question on the challenges experienced in records management in the stages of records, namely, creation/generation, classification/categorization, retention and maintenance, storage and access, disposal/disposition, audit compliance, and continuous improvement. The results of the study served as groundwork for formulating a training plan that seeks to improve the Records Management System, particularly the higher education institution in Nueva Vizcaya. The findings revealed that respondents are primarily young adult females aged 20-30 with bachelor's degrees, mostly staff members with 1-5 years of service. The results showed that secretaries and staff demonstrate a strong commitment to effective records management and compliance with the Data Privacy Act. However, there is still a need to improve areas like

organizing records into more specific categories, using automated systems, and centralizing access for better efficiency. The results also showed that despite general awareness of proper records management, efficiency is hindered by issues like data inaccuracy, duplication, limited space, incompatible systems, delayed disposal, regulatory changes, and a lack of standardized processes and sufficient staff. With these results, a training plan was crafted to address the common challenges encountered by the staff and secretaries in the stages of records management and to improve the records management system of higher education institutions.

*Keywords:* Challenges, higher education institution, practices, records management system, stages of records

## **SAB-SR-24**

### **Product Development of Bamboo Shoot Chicharon**

*Antonino, Pilar Khaetreen Anne F., Balongo, Halle Jane S., Furigay, Nico G., Homo, Baby Juhlliana N., & John Michael C. Ibarra, CGSP, CHP, MSHRM*

This research paper focused on developing a new plant-based chicharon made out of bamboo shoot, offering a healthier and more sustainable alternative to pork rinds chicharon. Bamboo shoots are highly nutritious, rich in fiber, vitamins, and minerals, and are widely available in Nueva Vizcaya. The study aimed to determine the appropriate ingredients and processes in the development of Bamboo Shoot Chicharon, evaluate its acceptability in terms of appearance, aroma, taste, and texture, and identify the most suitable recipe. Three product samples were developed and tested: Recipe 1 with 100% bamboo shoot flour, Recipe 2 with 50% bamboo shoot paste and 50% cornstarch, and Recipe 3 with 60% bamboo shoot paste and 40% flour. A final formulation using 80% bamboo shoot paste and 20% cornstarch was also tested. Evaluation was conducted by chicharon producers in Solano, Nueva Vizcaya. Findings showed that Recipe 3 and the final recipe were both rated as “very much acceptable” across all sensory attributes, with the final recipe receiving the highest overall acceptability score. These results suggest that bamboo shoot chicharon is a promising, well-received alternative to traditional pork chicharon, suitable for health-conscious consumers and sustainable food innovation.

*Keywords:* acceptability, product evaluation, vegetable chicharon

## **SAB-SR-25**

### **Features and Challenges of Capisaan Cave System for the Development of Tourist Infographic Guide**

*Balangatan, Roenejan, Mikaela P. Belisario, Aysha Mae B. Dela Cruz, Theresa Ines P. Gadiano, Shaira Mae B. Lim, Nikki V., & Ibarra, John Michael C.*

This study titled "Features and Challenges of Capisaan Cave System for the Development of Tourist Infographic Guide" aimed to explore the unique characteristics and challenges of the Capisaan Cave System to create an informative infographic guide for tourists. This study used a descriptive research design, and the research location was Barangay Capisaan in Nueva Vizcaya. The research design entailed the identification of a representative sample of informants, which included 10 DOT Accredited cave guides, 10 recent tourists, 1 tourism officer, and 1 barangay captain, using a self-constructed interview guide to get in-depth information. The findings showed that the huge length of the cave, various entrances, and stunning underground formations drew geologists and tourists, with informants citing that there was a need for ample funding to preserve the site. Specifically, the research affirmed

that the existing safety precautions were not adequate, with informants noting that additional safety equipment and communication systems were needed. The research concluded that the Capisaan Cave System needed more funding and assistance from government agencies to develop infrastructure and safety equipment. It also indicated that there was a need for continuous training of tour guides to improve their emergency response. Recommendations were given to give more funds for maintenance and development, hold training seminars for guides, invest in safety equipment, and impose stricter regulations to preserve the natural beauty of the cave.

*Keywords:* community-based tourism, cultural heritage tourism, ecotourism, environmental stewardship, Geotourism, Quality Education, Decent Work and Economic Growth, Responsible Consumption and Production, Climate Action, Life on Land, Sustainable Development

## **SAB-FR-01**

### **Faithful Stewardship: A Community-Centric Pilgrimage Site Revitalization**

*Mayvelyn S. Covita, PhD, John Michael C. Ibarra, Mark Ian J. Soriano, & Fr. Crispin A. Costales*

Developing a community's local tourism has always been regarded as a sustainable tool in contributing to an equitable sharing of benefits among the stakeholders, apart from the appreciation visitors achieve from partaking on a destination's local tourism efforts. Local tourism assets may come in different forms from natural to something that is organized and held on identified community sites. This qualitative study described the Mangkelleb Hill of Villaverde, Nueva Vizcaya as a pilgrimage site since the start of its initial development up to its current state, the challenges the management encountered to have it developed as a known pilgrimage site in the province, and eventually yielded a recommended plan of actions for the realization of the project's further development. The responses of key stakeholders through interviews and focus group discussions from the community where the site is located were solicited providing answers to the set objectives. The study was conducted in the first semester of the academic year 2024-2025 and it likewise endeavored to unfold the key elements that contribute and may further continue to support a desired level or extent of partnership among key stakeholders to achieve set goals in relation to a community project anchored on religious and tourism purposes and activities.

*Keywords:* local tourism, religious tourism, pilgrimage site, community-based sustainable tourism (CBST)

## **SAB-FR-02**

### **Suitability of the SMU's Demo Farm for the Production of Cacao: A PHEI-NGO-GO Initiative**

*Angela C. Garra, Rodora P. Tipay, Robert S. Aceret, Joel Ramon Gabriel R. Espino, Regidor L. Almendral, Michael S. Catacutan, Julie E. Bagguatan, & Silvester T. Miguel*

Cacao is a high-value crop with a growing global demand. This study determined the suitability of the SMU's Demo Farm for the Production of cacao. The study employed experimentation and personal interviews. Collected data were presented, analyzed, and interpreted through descriptive analysis. Soil tests using the LaMotte method revealed nutrient and pH imbalances that could hinder optimal crop growth. Nitrogen levels were moderately low, phosphorus was consistently deficient, and potassium varied across trials, with acidic pH levels potentially affecting nutrient uptake. UF 18 and BR 25 emerged as the most commonly cultivated and recommended cacao varieties due to their adaptability, early flowering, productivity, and seed quality. Germination techniques used by local farmers were organic and low-cost, involving materials such as sawdust, cloth, and polyethylene bags. Seeds typically germinate within 2–3 days and the planted seeds should be kept in shaded, humid environments. These findings inform the development of IEC material or brochure by highlighting the most suitable cacao varieties and best germination method adapted to local conditions.

*Keywords:* soil profile, cacao varieties, germination techniques, IEC material

### **SAB-FR-03**

#### **Steering Digital Marketing in Philippine Higher Education: Benefits, Challenges, and Sustainable Strategies**

*Monaloufel Jasmin F. Rosario, PhD, Rocel Audrey Batara, Rheena Nina Salinas, & Johanna Tulauan*

This study critically examines the efficacy of Project 360 Branding FEAT as a tool in digital marketing feedback and assessment framework purposely designed for higher education institutions in the Philippines. Through qualitative research design, the investigation utilized document analysis and data scanning to identify the tool's influence on institutional marketing strategy innovation and stakeholder engagement. The findings posit that universities and colleges implementing Project 360 demonstrated a quantifiable improvement in marketing engagement metrics, with a mean increase of 35% in stakeholder response rates to promotional campaigns. Additionally, qualitative feedback from users emphasized the tool's capacity to generate real-time performance insights, thus, enabling institutions to adopt data-informed strategies that enhanced brand visibility and social media positioning. The use of thematic analysis further revealed that personalized feedback mechanisms embedded within the tool contributed to a culture of continuous marketing refinement and strategic adaptability. Nevertheless, the study also identified operational barriers, particularly in relation to digital literacy issues in technological integration, which reveals extents and limitations on optimal utilization in some institutional contexts. Conclusively, the research affirms the potential of Project 360 Branding FEAT as a transformative instrument for digital marketing in the Philippine higher education sector. Its scalable and systematic approach to feedback-driven strategy development aligns with best practices in digital communication. The study recommends future research to optimize the tool's scalability and tailor its functionalities to accommodate varying levels of institutional digital maturity and using other variables to enhance the reliability and credibility of its results.

*Keywords:* Branding, digital communication, institutional marketing

### **SAB-FR-04**

#### **Sustainable Campuses via Bins to Behavior: Investigating Waste Management Actors in Higher Education by Decoding the Waste Chain**

*Regina D. Ramel, PhD, John Lindy R. Soriano, CPA, Jeanette R. Mania, CPA, Jeniviv V. Pascual, & Micah Ryan B. Ramel, PhD*

This study examines the challenges encountered by private higher education institutions in Nueva Vizcaya in implementing effective solid waste management programs in compliance with RA 9003. Key findings reveal that while both HEIS exhibit organized systems, gaps persist in awareness, pro-environmental intentions, infrastructure, and behavioral adherence among students and faculty. Faculty across both institutions generally show higher awareness levels compared to students, with SMU faculty demonstrating environmentalist attitudes and students exhibiting pre-environmentalist behaviors. Common issues such as improper waste segregation, insufficient disposal facilities, and lack of active participation hinder recycling efficiency and contribute to environmental degradation. Cultural attitudes and poor adherence to policies, including CLAYGO, exacerbate these problems. Recommendations include enhancing awareness campaigns, improving waste treatment and recycling systems, addressing behavioral gaps through education, upgrading infrastructure, and fostering community engagement. By addressing these challenges, both HEIS can align practices with RA 9003, cultivate a culture of environmental stewardship, and contribute to long-term sustainability.

*Keywords:* Solid Waste Management, Environmental Stewardship, Pro-environmental behavior, Awareness Campaigns, Sustainable Practices

## **SAB-FR-05**

### **Nueva Vizcaya MSMEs' Contribution to Sustainable Development Goals Attainment and Challenges Encountered: Towards a Proposed Training Plan with DTI and PLGU**

*Harrison T. Villanueva, PhD, Sheryl A. Adducul-Baria, MBA, Dorilyn C. Tiongson, JD, & Atty. Francis Leo C. Tugab, CPA*

This study investigates the SDG contributions and challenges of MSMEs in Nueva Vizcaya to inform a collaborative training plan with the DTI and PLGU. Qualitative data from interviews with DTI-identified MSMEs with good SDG practices reveal a strong emphasis on value-added agricultural processing. These enterprises, typically operating for 6-9 years with varied capital and sales (P300K-P10M), actively advance SDGs related to generating livelihoods and supporting local agriculture (SDG 1 & 2), promoting health and well-being (SDG 3), investing in education and skills (SDG 4), championing gender equality and inclusivity (SDG 5 & 10), implementing sustainable water and energy practices (SDG 6 & 7), fostering decent work and economic growth (SDG 8), driving innovation and infrastructure development (SDG 9), building sustainable communities (SDG 11), promoting responsible consumption and production (SDG 12), taking climate action through sustainable practices and reforestation (SDG 13 & 15), contributing to peace and justice through ethical operations and community engagement (SDG 16), and forging crucial partnerships for collective impact (SDG 17), while also making indirect contributions to the watersheds instead of marine conservation despite their inland location (SDG 14). Despite government support and recognition, MSMEs face financial, supply chain, resource, infrastructure, knowledge, and market-related obstacles. The proposed training plan aims to address these challenges, empowering MSMEs in Nueva Vizcaya to become stronger drivers of sustainable development.

*Keywords:* academe-government engagement, SDG contribution, sustainable business, sustainable development, SDG training plan

**Research Unit: School of Engineering, Architecture and Information  
Technology**

**Research Coordinator: Engr. Gerene-Leigh C. Almazan**

**Panel of Reviewers:**

| <b>Area of Specialization</b> | <b>Name of Faculty</b>                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Engineering</b>            | Carina S. Mallillin, MSME<br>Dan Kenneth Lutchina, Reg. CE<br>Jefrie T. Alindayu, MSCE<br>Irvin Paul D. Quines, Reg. CE<br>Andres P. Gualon Jr., MSCE<br>Teresita L. Reyes, EdD<br>Joel T. Mendoza, Reg. ECE<br>Angelino A. Pimentel, MSECE<br>Karen Suggeste, Reg. CE<br>Silverio V. Magday Jr., Reg. ECE<br>Teofilo M. Sagabaen, Reg. ECE<br>Jojo C. Mariano, Reg. EE, MBA<br>Wenson R. Evangelista, Reg. EE |
| <b>Architecture</b>           | Carlo Artus D. Julian, UAP<br>Charmaine B. Bacarra, UAP<br>Genesis P. Morales, UAP<br>Audry May C. Dominguez, UAP<br>Carina B. Binwag, UAP                                                                                                                                                                                                                                                                     |
| <b>Information Technology</b> | Adonis Garces, DIT<br>Paulina A. Marzan, MSIT<br>Essel Canaberal, MIT<br>Jerickson Chua, MIT<br>Rogie Taborda, MIT<br>Rocel Audrey Batara, BSIT<br>Milagros S. Constantino, MIT                                                                                                                                                                                                                                |
| <b>Guest Panel</b>            | Jerry R. Gamiao, Reg. ECE (Specialization:<br>Biomedical Engineering)<br>Moises Viernes, MD (Specialization: Medicine)                                                                                                                                                                                                                                                                                         |

## **SEAIT-SR-01**

### **Seismic Vulnerability Assessment Using Rapid Visual Assessment And Fragility Curve For Selected Buildings At Saint Louis College Of Solano, Inc.**

*Jose Karlos L. Estabillo, Angel Kyle G. Gonzales, Luis James P. Pascual, Alexander R. Roldan Jr., & Christopher John P. De Vera, RCE*

Saint Louis College of Solano, Inc. (SLCSI), which is located in Seismic Zone 4 near the active Maddiangat Fault, is exposed to significant seismic risk. Throughout the years, no post-earthquake assessments have been conducted on its major buildings. This study was conducted to conduct a thorough seismic risk assessment to ensure building resilience and campus safety. Using UBC 1997 and ASCE 41-17 as a basis for simulations, the selected buildings: Phase 1 & 2 Building, Millennium Building, and Administration Building were subjected to Rapid Visual Assessment (RVA), seismic nonlinear analyses (Incremental Dynamic Analysis), and fragility curves were developed. Based on Solano's peak ground accelerations—0.4g for Design Basis Earthquake (DBE) and 0.5g for Maximum Considered Earthquake (MCE)—site-specific assessments showed a probability of exceedance below 2% for all buildings, indicating low seismic risk. However, building-specific analyses revealed varied performance: the Administration Building had negligible exceedance, the Millennium Building showed slight exceedance, and the Phase 1 & 2 Building exhibited the highest exceedance at 9.65%. Widespread localized weaknesses were identified in both the Millennium and Phase 1 & 2 Buildings, affecting their lateral load-resisting systems. Exterior Shear Walls (ESW) was recommended as a focused retrofitting strategy to strengthen global structural resilience.

*Keywords:* Seismic vulnerability assessment, performance-based evaluation, incremental dynamic analysis, rapid visual assessment, fragility curve, shear wall retrofitting

## **SEAIT-SR-02**

### **CocoCane: The Effects of Sugarcane Bagasse Ash and Coconut Coir Ash as Partial Cement Replacement on the Workability and Strength of Concrete**

*Ruzzel G. Cailin, Marielle Angelique A. Catap, Althea Zhayne G. Padilla, Eula Francesca Villamayor, & Christopher John P. De Vera, RCE*

This study aimed to assess the sustainability of partially replacing coconut coir ash (CCA) and sugarcane bagasse ash (SCBA) for ordinary Portland cement (OPC) in concrete. SCBA and CCA provide a sustainable replacement that lessens dependability on non-renewable resources and encourages ecologically friendly construction methods in the Philippines. The study evaluated the impact of 5%, 15%, and 25% ash replacement on concrete performance using a factorial design. For 28 days, 45 cylinders with a 1:2:4 mix ratio underwent curing. The results indicate that as the amount of ash in concrete increased, its workability improved. The

slump values varied from 25.4 mm to 120 mm at 5% replacement, 30 mm to 105 mm at 15%, and 76.2 mm to 127 mm at 25%. The increased slump at higher replacement levels suggests better flowability, attributable to the finer particles and pozzolanic character of the added ash components. The control mix obtained a compressive strength of 15.58 MPa. The highest compressive strength, 18.30 MPa, was recorded at 5% replacement with 100% SCBA, exceeding the control mix. While compressive strength generally declined as CCA level and replacement levels increased, it dropped significantly to 4.84 MPa when 25% CCA was used without SCBA. The influence of ash type and ash quantity on performance was highlighted by statistical analysis, which indicates significant differences across mixtures. This highlights SCBA's more consistent and effective pozzolanic performance.

*Keywords:* Sugarcane Bagasse Ash (SCBA), Coconut Coir Ash (CCA), Partial Replacement, and Compressive Strength

### **SEAIT-SR-03**

#### **CARIG: A Proposed Parking Building with Extended Terminal at Four Lanes, Santiago City, Isabela**

*Ferdinand B. Cudiamat, Jodi Mae P. Monayao, Kyle Ervin Redden C. Gamboa, Mhax Louie L. Salazar, Ryan Jay S. Viernes, & Christopher John P. De Vera, RCE*

This thesis proposes the development of a four-story multi-level parking building at Four Lanes, Santiago City, Isabela. Surveys, site visits, and data gathering revealed a significant shortage of designated parking spaces, causing congestion and inconvenience for motorists. To address this, a strategic site was selected and thoroughly analyzed based on infrastructure, traffic flow, accessibility, zoning regulations, and environmental factors. The proposed building, with a footprint of 4,644 square meters, includes complete architectural, structural, plumbing, electrical, and auxiliary plans designed in compliance with national codes and standards. The structure prioritizes functionality, safety, and cost-efficiency and allows for future expansion. The building will provide a total of 541 parking slots, distributed as follows: 24 for jeepneys, 16 for buses, 24 for public-use vans, 105 for motorcycles, 348 for private vehicles (cars, pickups, and vans), and 24 for persons with disabilities (PWDs). The estimated construction cost is ₱279,606,224.52, with an expected completion time of 324 calendar days. This proposed project aims to support Santiago City's urban development efforts by offering a practical, research-based solution to its growing parking infrastructure needs.

*Keywords:* Parking building, extended terminal, Santiago City, parking sensors, lack of parking slots/spaces

### **SEAIT-SR-04**

#### **Permeability of Clayey Soil Mixed With Gmelina Wood Ash and Pulverized Chicken Bones Used For Sanitary Landfill as Liners**

*Stephanie M. Aguinaldo, Bea S. Ballucanag, Genesis Aubrey A. Gombio, Jerome G. Sagun, & Jefrie T. Alindayu, MSCE*

This study investigates the potential of Gmelina wood ash (GWA) and pulverized chicken bone (PCB) as sustainable, locally sourced additives for improving the performance of clayey soil used in sanitary landfill liners. GWA, with its high silica content, exhibits pozzolanic properties that enhance soil structure. At the same time, PCB contributes calcium oxide, promoting cementitious behavior that strengthens the soil and reduces its permeability. Clayey soil

samples from the Aritao Sanitary Landfill in Nueva Vizcaya were treated with various proportions of GWA and PCB and tested according to ASTM standards. The optimal blend of 79.4% clayey soil, 16% GWA, and 4.6% PCB demonstrated the lowest permeability and improved geotechnical stability. Notably, this composition led to a 70.16% reduction in the required liner thickness, indicating enhanced barrier performance and material efficiency. Statistical analysis confirmed the significant role of both GWA and PCB in improving hydraulic characteristics. While initial assumptions suggested higher costs compared to conventional materials like bentonite, further cost unit analysis revealed that integrating GWA and PCB is, in fact, more economical than sourcing bentonite clay. These findings support the viability of using agricultural and organic waste in geotechnical applications, offering an environmentally responsible and regionally appropriate solution for landfill liner construction.

*Keywords:* Clayey soil, Gmelina wood ash, pulverized chicken bone, permeability, sanitary landfill liner, soil stabilization, sustainable materials

## **SEAIT-SR-05**

### **Investigation on the Mechanical Properties of Sustainable Cement Composites: A Comparative Study of Coconut Shell Ash with Coconut Pith Ash Vs Corn Cob Ash with Coconut Pith Ash**

*Janelle Kate B. Bay-an, Jieziel Mae B. Pagaduan, Beth Frida P. Paligan, Imranuddin Mohammad M. Syed, & Christopher John P. De Vera, RCE*

The global construction industry remains a major contributor to environmental degradation due to its reliance on conventional cement, which accounts for approximately 8% of global carbon dioxide emissions. As a response to this challenge, this study explored the integration of agricultural waste materials, specifically Coconut Shell Ash (CSA), Corn Cob Ash (CCA), and Coconut Pith Ash (CPA) as partial substitutes for cement in concrete production. The research evaluated and compared the compressive strength, water absorption, and thermal insulation properties of concrete specimens incorporating CSA with CPA and CCA with CPA at replacement levels of 10%, 15%, and 20%. The findings revealed that for CSA-CPA mixes, compressive strength improved with increasing replacement percentage, peaking at 15%. However, it remained lower than the control. Meanwhile, CCA-CPA mixes showed a non-linear trend, with compressive strength decreasing at 10% but slightly recovering at 15%. In terms of water absorption, CSA mixes showed a consistent increase with higher replacement levels. In contrast, CCA mixes demonstrated a decrease at 15%, suggesting better densification. Thermal insulation tests indicated that both CSA and CCA enhanced thermal resistance, with 10% replacement yielding the most significant improvements in both cases. Statistical analysis via ANOVA and Tukey's HSD confirmed significant differences in mechanical and thermal properties across most treatment groups. The results suggest that CSA and CCA, particularly when combined with CPA, offer promising alternatives to conventional cement, contributing to sustainable, energy-efficient, and climate-resilient construction.

*Keywords:* ash admixtures, sustainable concrete, thermal insulation, compressive strength, water absorption

## **SEAIT-SR-06**

### **Learners' Oasis: Design and Implementation Plan of a Dynamic Study Hub for Enhanced Learning Environments in Bayombong, Nueva Vizcaya**

*Mark Reniel M. Bermudez, Ellieskcire L. Galapate, Alleli Jan Iris Y. Grospe, Aubrey Anne L. Torralba, & Aurus Jodeo C. Tiam, MSCE*

This study aimed to assess the feasibility and design of a 24-hour study hub, "Learners' Oasis," to address the unmet needs of students who struggle with traditional café environments. Initial assessments were conducted using online survey forms to identify the discomfort of the learners in their study spaces. Data was collected through a Google Form survey distributed to 40 Saint Mary's University students, followed by face-to-face surveys with 815 students from six institutions and two café owners. The gathered data were used in the hub's design and infrastructure planning. On-site visits and consultations with the Provincial Engineering Office were also conducted to address environmental and engineering concerns. The hub's design follows the National Building Code, National Structural Code, and relevant standards in the Philippines, ensuring compliance with safety, accessibility, and structural guidelines. Program of Works was prepared, and a cost estimate of ₱37,706,430.18 was generated, including a construction management plan with a 267-day timeline. "Learners' Oasis" will feature quiet study areas, group spaces, stable WiFi, ergonomic furniture, and additional amenities such as napping areas and printing stations, creating an inclusive, comfortable, and productive learning environment for learners.

*Keywords:* Study hub, student learning environment, study space design, ergonomic furniture.

## **SEAIT-SR-07**

### **SARANAY: A Proposed Level 1 Private Hospital in Nagtipunan, Quirino "To Bridge the Gap and Enhance Healthcare Access"**

*Olympia V. Agapito, Novie Rose A. Gabayni, Vida Fria D. Galasinao, Jescyrish Kate R. Melchor, Rayah Angela R. Vilorina, & Aurus Jodeo C. Tiam, MSCE*

This study addresses the critical healthcare access gap in Nagtipunan, Quirino, a rural municipality currently underserved by its existing Rural Healthcare Unit (RHU), which lacks in-patient and essential amenities. The research proposed the design and planning of "SARANAY: A Proposed Level 1 Private Hospital," aiming to provide comprehensive and affordable medical care, thereby reducing the need for residents to travel to distant facilities. Through extensive data gathering, including population growth projections for Nagtipunan up to 2060 (estimated at 46,651), and analysis of local morbidity and mortality rates, a 50-bed capacity was determined to meet future healthcare demands. The hospital's architectural design adheres strictly to the National Building Code of the Philippines and Department of Health Guidelines, ensuring safety, functionality, and accessibility. Detailed structural plans comply with the National Structural Code of the Philippines (NSCP 2015), incorporating considerations for dead, live, and wind loads, and utilizing high-strength materials. Plumbing and electrical layouts are also meticulously designed to meet regulatory standards. A comprehensive cost estimate of Php 97,868,668.67 was calculated using DPWH standards, alongside a project timeline developed via the Critical Path Method. Financial analysis projects an annual net income of P6,159,139.94, indicating a return on investment within approximately 11 years. This project aims to significantly enhance healthcare services and promote health equity for the community of Nagtipunan.

*Keywords:* Architectural Design, Cost Estimate, Healthcare Access, Level 1 Hospital, Medical Infrastructure, Structural Analysis

### **SEAIT-SR-08**

#### **A Proposed Multipurpose Building in Tourism Village, Mabatobato, Lamut, Ifugao**

*Marx Junel A. Badua, Hadazzah Janeri B. Humiwat, Charlene Mae B. Panit, Jamaica Rose U. Payumo, & Michelle Kyra S. Bautista, MECE*

This project proposal presents a plan to address the absence of a venue for significant indoor events by proposing the establishment of a Multipurpose Building. In pursuit of the project's objectives, the researchers undertook comprehensive measures encompassing site visitation and data gathering, design and preparation of plans, material specification preparation, and cost estimation coupled with construction project management. Initially, the researchers inspected the site to evaluate its physical condition and conducted surveys over an 1,800 square-meter building footprint to establish precise points and dimensions. The researchers gathered data related to the research problem and proposed solutions. In designing the project's layout, architecture, and structure, compliance with the National Building Code and the National Structural Code of the Philippines was ensured, utilizing software tools such as AutoCAD, SketchUp Pro, RCDC, and STAAD Pro. These tools facilitated detailed designs and structural integrity assessments. Material specifications were prepared, and a comprehensive cost estimate of P70, 062,848.20 was developed, calculating a rate of P26, 702.82 per square meter, excluding inventory costs and incorporating current market prices for materials and labor. Additionally, the researchers devised a detailed construction project management plan, outlining a 248-calendar-day timeline using a Bar Chart, S-Curve, and CPM-PERT to ensure efficient coordination and timely task completion. In summary, the proposed Multipurpose Building presents a concrete solution for showcasing the rich culture and traditions of the municipality, providing a space where residents can gather for social activities, interactive exhibits, workshops, and community events, thereby fostering greater understanding and appreciation among both residents and visitors.

*Keywords:* Multipurpose Building, Cultural Building, Cultural Exhibition, Structural Integrity

### **SEAIT-SR-09**

#### **Waste To Wealth: Utilization Of the Didipio Mine's Tailing Waste as a Partial Cement Replacement in Concrete Matrix**

*Allen Jay A. Abalos, Kwein Chi A. Guimbangan, Icy E. Panganiban, Krystelle Gem G. Ramos, Jannah Rica B. Sierra, & Carmelo T. Andrada II, RCE*

The contemporary infrastructure heavily relies on predominantly cement-bound concrete, contributing to annual CO<sub>2</sub> emissions of approximately four billion tons. This manufacturing process poses significant environmental hazards, including air, water, and soil pollution, alongside the generation of substantial cement dust. Consequently, there has been an escalating interest in exploring alternative raw materials to mitigate these adverse environmental effects. This study aims to mitigate the accumulation of Mine Tailings Waste (MTW) deposits by investigating the feasibility of integrating MTW as a partial substitute for cement. Experimental analyses were conducted on concrete specimens incorporating MTW samples sourced from the Didipio Mine, assessing their compressive and flexural strengths across replacement rates of 5%, 10%, and 15%. Results revealed that the inclusion of MTW had

a detrimental effect on concrete strength at 5% and 10% replacement levels, exhibiting diminished compressive strength compared to the control group. However, at a 15% replacement rate, there was a discernible increase in compressive strength. Furthermore, examination of beam samples demonstrated that the 5% and 10% replacement levels yielded superior flexural strength relative to the control samples, albeit a reduction in flexural strength was observed at the 15% replacement level. Statistical analysis employing multiple linear regression analysis (MLRA) revealed a weak yet positive correlation (0.113) between MTW content and compressive strength for cylinder samples. Conversely, a weak negative correlation (-0.026) was identified between MTW content and flexural strength. Despite the observed fluctuations, the findings suggest that MTW holds promise as a viable alternative for partially substituting cement in concrete production.

*Keywords:* Mine tailing waste, compressive strength, flexural strength

## **SEAIT-SR-10**

### **POWERSYNC: Optimizing Energy Monitoring Through Arduino and Raspberry Pi Server Based Control System**

*Euder Wayne P. Dugay, Gabrielle C. Rivera, Lloyd Vince Angelo B. Tadeo, & Kenosis John B. Wajchina, RCpE*

This study focuses on developing an integrated energy monitoring and control system consisting of a Windows application and private website for the TTBD0. The Windows application is designed to monitor and control electrical loads within the facility, while the private website displays statistical reports of energy consumption over specific time periods. The project incorporates an IoT system using Arduino and Raspberry Pi, along with a scale model of the TTBD0 for demonstration purposes. The primary objective is to create an integrated system that connects hardware components with software controls through LAN communication protocols, providing users real-time status updates about energy consumption via the website. The proposed solution aims to effectively monitor and control active loads on a miniature scale of the TTBD0 while tracking and displaying energy consumption data.

*Keywords:* Windows App, Website, Energy Monitoring and Control, Raspberry Pi, Arduino

## **SEAIT-SR-11**

### **ERASERBOT V3.0: Optimization of an Automated Blackboard Eraser**

*John Carlo T. Galvizo, Ed Jhon Paul C. Neo, Joanariuz Maximine G. Silverio, & Teofilo M. Sagabaen, RECE*

In educational settings, upholding cleanliness and guaranteeing effective classroom management is vital for successful teaching and learning. Conventional blackboard erasing requires considerable effort, takes a lot of time, and can expose educators to chalk dust, potentially leading to health issues over time. This research introduces the creation and assessment of EraserBot V3.0, an automated blackboard eraser aimed at enhancing erasing capability, efficiency, and dependability via automation. The design employs two Nema 17 stepper motors linked to GT2 timing belts for coordinated horizontal motion and a DC motor connected to paint rollers for the erasing function. An IR receiver paired with a remote control enables the system to function in one full cycle, with a vacuum cleaner subsequently turned on to gather chalk dust. An Arduino Uno R3 acts as the primary controller, complemented by stepper motor drivers and a toggle switch for controlling the main power. The blackboard is

made of plywood and is held up by a tubular steel frame measuring 2"x1". The system underwent testing against manual erasing and earlier versions of EraserBot over four trials. In every trial, the blackboard was completely wiped clean within a 20-second interval. Findings validated the notable enhancement in performance and dependability of EraserBot V3.0 compared to previous techniques. The research effectively created a working prototype that automates the cleaning process, contributing to safer and tidier classroom settings.

*Keywords:* Automation, blackboard eraser, stepper motor, vacuum system, Arduino, chalk dust collection

## **SEAIT-SR-12**

### **SwineTech: Development of Cost-Efficient Automated Feeding and Watering System for Small-Scale Piggeries with Real-Time Monitoring of Stocks**

*Eric C. Dela Cruz Jr., Karla Mae D. Marzan, Mary Rose C. Simangan, Kimberly Ann C. Tugade, & Paulina A. Marzan, RCpE*

This study presented the design and development of SwineTech, an automated feeding and watering system tailored for small-scale piggery operations in rural settings, particularly in Salinas, Bambang, Nueva Vizcaya. Recognizing the inefficiencies and labor demands of traditional pig farming methods, the system integrates hardware and software solutions to automate feeding schedules and monitor feed and water stock levels in real-time. The system alerts users via SMS when critical thresholds are reached, enhancing resource management and reducing human error. The system operates on scheduled routines and alerts the user via SMS when feed or water reaches warning or critical levels, ensuring timely replenishment. It also minimizes manual labor and improves feed consistency. Through trial runs, the prototype achieved a 95% dispensing accuracy and reduced feed wastage by up to 75%. A side-by-side comparison with manual methods showed significant improvements in time efficiency, resource use, and daily operational costs. Financial analysis confirms the viability of SwineTech, with an estimated return on investment within 4–5 months and a projected lifespan of 5–7 years. The system's low production cost, modular design, and adaptability to different pig growth stages make it an accessible and sustainable solution for rural farmers. By leveraging simple yet effective automation, this project empowers small-scale pig raisers to modernize their operations, increase productivity, and improve overall animal welfare.

*Keywords:* Swine, Dispensing, Automated, small-scale piggeries, real-time

## **SEAIT-SR-13**

### **Enhanced RFID-Based Equipment Borrowing and Inventory System Focused On Scalability, Automation, and Monitoring**

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The improved RFID-based equipment borrowing and inventory system shown in this project is intended to increase engineering lab productivity, security, and scalability. The system streamlined equipment administration for lab assistants' automated transaction recording. It allows real-time monitoring by moving from a manual to a web-based solution. It uses RFID

technology for precise user and object identification, incorporates automatic report production that complies with ISO requirements and is built using JavaScript and MySQL to allow both online and offline operations. For long-term maintainability and flexibility among academic institutions, the system places a strong emphasis on data protection, intuitive user interfaces, and modular development. In addition to enhancing daily lab operations, the system lays the groundwork for upcoming integrations, which include analytics, IoT compatibility, and institution-wide implementation.

*Keywords:* Web-Based application, MySQL database, inventory management, automation, data security.

## **SEAIT-SR-14**

### **IoT-Enabled Drip Irrigation for Real-Time Water Monitoring of Strawberry Farm**

*Acosta, Bernard Jhon C., Aseron, Herman Angelo B., Hermoso, Julius Caesar I., Odonez, Frank Gerald B., & Reyes, Rojan I. RECE*

This study, "IoT-Enabled Drip Irrigation for Real-Time Water Monitoring of Strawberry Farm," investigates the feasibility and benefits of implementing an IoT-enabled drip irrigation system at Humming Strawberry Farm in Amaballo North, Bagabag, Nueva Vizcaya. Addressing challenges in traditional irrigation like water shortage and uneven distribution, the research aimed to optimize water usage, enhance crop yield, and enable remote monitoring. The system utilizes soil moisture and temperature/humidity sensors to gather real-time environmental data. An Arduino Mega microcontroller processes this data to automate drip irrigation, ensuring precise water delivery. Remote control is facilitated via a Wi-Fi module and the Blynk IoT platform, allowing farmers to monitor and manage the system remotely. A prototype was developed and tested at the farm from April 11 to May 11, 2025. Results showed a significant 32% reduction in water usage (190 liters vs. 280 liters for traditional irrigation). Strawberry yield increased by 31% in weight (4.6 kg vs. 3.5 kg) and 36% in quantity (95 vs. 70 strawberries). Furthermore, labor requirements for irrigation were substantially reduced from 1.5 hours to 15 minutes daily. These statistically significant findings ( $p < 0.05$ ) validate the system's effectiveness in water conservation and agricultural productivity, demonstrating a promising solution for sustainable farming.

*Keywords:* IoT (Internet of Things), drip irrigation, real-time monitoring, water monitoring, strawberry farm, agriculture

## **SEAIT-SR-15**

### **FISHER: Fully Integrated System for Handling, Evisceration, and Refinement of Tilapia Fish Establishing Potential Cobots Adaptation**

*Jude Louis M. Penequito, Lealie Deedrey S. Visitacion, Joana Faith P. Zafra, & Rojan I. Reyes, RECE*

The FISHER cobot system (Fully Integrated System for Handling, Evisceration, and Refinement of Tilapia Fish, Establishing Potential Cobots Adaptation) presents an innovative approach to fish processing by integrating collaborative robotics (cobots) with advanced automation to enhance operational performance, worker safety, and product quality. This study aimed to design, develop, and evaluate an end-effector system for cleaning fish initial

for tilapia (*Oreochromis niloticus*), establishing potential collaborative robots (Cobot) adaptation to future high-value fish products' cleaning processes for enhanced safety. Utilizing a combination of hardware components—including an ATmega328P microcontroller, electric descender, cutting tools, sensors, and a DOBOT CR3 collaborative robot— FISHER automates traditionally labor-intensive and hazardous tasks while maintaining precision and minimizing fish damage. The research methodology involved a mixed-methods approach, gathering quantitative data through comparative performance trials and statistical analysis using the Mann-Whitney U-Test, as well as qualitative feedback from industry practitioners via surveys and interviews. Results indicate that although manual processing currently remains faster ( $p$ -value $<0.05$ ), the FISHER system significantly improves safety by reducing direct human contact with sharp instruments and repetitive strain while also offering comparable results based on qualitative feedback methods. The system's modular and programmable design demonstrates potential adaptability for more hazardous species, such as pufferfish or high-value fish, further emphasizing its industrial applicability. This thesis contributes a comprehensive framework for the integration of cobots in fish processing, advocating for safer, more efficient, and scalable automation solutions within the seafood industry.

*Keywords:* Collaborative robots, DOBOT-CR3, cobot end-effector, fish processing automation, seafood industry

## **SEAIT-SR-16**

### **Watcher: A Centralized Electrical Energy Monitoring and Control System with LAN Connectivity**

*Edrick Lorence B. Garcia, Shein Marcos, James Michael B. Tallungan, & Teofilo M. Sagabaen, RECE*

With increasing energy consumption in large facilities such as schools and offices, the need for efficient energy monitoring and control has become critical. This study presents an Arduino-based Energy Monitoring and Control System designed to help facility managers detect and reduce unnecessary power usage, especially outside of operational hours. The system uses three PZEM-004T modules to measure voltage, current, power, and energy across three branches in a panel board, with data transmitted via Ethernet and stored in a cloud database. An external contactor was added to demonstrate the potential for remote control, though no existing panel wirings were modified. The study aimed to (a) monitor real-time energy data using non-invasive sensors, (b) demonstrate remote appliance control, and (c) compare readings from current transformers (CTs) with those from a standard clamp meter to assess accuracy. Results showed consistent voltage and power measurements, with average values of 703.6 W, 73.5 W, and 2241.4 W for the three monitored branches. A paired t-test comparing CT readings to clamp meter readings yielded  $t(1) = 19.25$ ,  $p < 0.05$ , indicating a statistically significant difference in current values, primarily due to calibration variance. Despite this, trends remained consistent across both instruments. The system demonstrated effective real-time monitoring and the potential for scalable deployment, with future improvements targeting calibration, accuracy, and broader coverage.

*Keywords:* Energy Monitoring, IoT, Arduino, Current Transformer, Contactor, Remote Control

## **SEAIT-SR-17**

### **BREWBOT: Design and Implementation of Collaborative Robotic Arm (DOBOT CR3) System for Turkish Sand Coffee Making**

*Hershey D. Basconcillo, Elija Marie B. Mabbayad, Denise Vaughnne A. Visbal, & Gerene-Leigh C. Almazan, RECE*

This study explores the integration of automation in traditional culinary practices through the design and implementation of BREWBOT, a collaborative robotic arm system utilizing the DOBOT CR3 to automate Turkish sand coffee preparation. The primary objective is to replicate the traditional brewing process with high accuracy and consistency, focusing on ingredient dispensing and timing. The research addressed two main problems: (1) evaluating the DOBOT CR3's accuracy in dispensing coffee, water, and sugar within traditional standards, and (2) assessing the consistency of brewing operations across multiple trials. Using an experimental design, 30 trials were conducted with an Arduino-based dispenser, custom gripper, sand heating station, and block-based programming. Descriptive statistics and one-sample t-tests showed that coffee and water dispensing were within acceptable ranges and operations remained consistent. However, sugar dispensing deviated significantly from the target ( $p = 0.013$ ), indicating the need for calibration. Despite this, the system demonstrated high accuracy and reliability in replicating traditional brewing. The findings suggest that robotics can support cultural preservation while improving consistency and efficiency in food preparation. BREWBOT offers practical applications in both commercial settings and heritage-based culinary innovation.

*Keywords:* collaborative robot, DOBOT CR3, Turkish sand coffee, food automation, cultural preservation

## **SEAIT-SR-18**

### **Electricity Monitoring and Prevention System with Anti-Theft by Using IoT-Based Technology**

*Dheiven Kyle D. Estabillo, John Russel A. Guevarra, John Dominic G. James, JV Dominic D. Pilar, & Wenson R. Evangelista, REE*

Electricity theft and inefficient monitoring continue to present significant challenges to the Philippine energy sector, resulting in economic losses and compromised service reliability. This project addresses these issues by integrating Internet of Things (IoT) technology to develop an advanced electricity monitoring and anti-theft system. The primary objective is to design and prototype an IoT-based solution capable of real-time monitoring and theft detection. Utilizing the ESP-WROOM32 microcontroller in conjunction with the Blynk application, the system was developed following the Design-Build-Test (DBT) methodology. A series of 10 trials was conducted to compare Blynk-recorded data (expected values) with traditional measurement tools (actual values), yielding low percentage errors of 0.54% for voltage, 1.18% for current, and 1.69% for power, indicating strong measurement accuracy. Additionally, the system was tested under both normal and tampered conditions to assess its theft detection capabilities. Significant differences were observed, particularly in power consumption = 14.16, as well as notable variations in voltage = 0.74, and current 0.06, confirming Blynk's reliability in identifying electricity theft activities. These findings validate the functionality and dependability of the IoT-based prepaid electricity meter, demonstrating its potential to enhance energy management, increase transparency, and promote sustainable living in urban environments through accurate, real-time monitoring and improved detection of unauthorized electricity usage.

*Keywords:* Blynk, ESPWROOM32, Energy Monitoring, Anti-Theft, Internet-of-Things

## **SEAIT-SR-19**

## **Prepaid Electricity by Using IoT Technology in Wet Market of Barangay Don Mariano Perez, Bayombong, Nueva Vizcaya**

*Rolan Miguel S. Bautista, Russel Jun C. Fontelera, Charls Lester B. Geronimo, Adrian Paul L. Lacbu, & Wenson R. Evangelista, REE*

With the continuous growth of urban areas and increasing electricity demands, efficient and transparent electricity management becomes increasingly vital, particularly in public commercial spaces like wet markets. Traditional billing systems in these environments often rely on fixed rates, leading to overcharging and limited control for stall owners. In response, this study presents a Prepaid Electricity Meter and Monitoring System powered by Internet of Things (IoT) technology, specifically designed for the wet market of Barangay Don Mariano Perez, Bayombong, Nueva Vizcaya. The objectives were to (a) design a framework for a prepaid metering system, (b) develop a working prototype utilizing IoT, and (c) test the system to verify accuracy and reliability. The system employs the ESP32-DevKit microcontroller and the Blynk application for real-time monitoring and control, following the Design-Build-Test (DBT) methodology. Ten trials were conducted across four simulated vendor profiles, comparing data from Blynk (expected) with readings from standard instruments (actual). The results showed percentage errors of 0.0741% for voltage, 1.1364% for current, and 1.1383% for power—all within the acceptable 2% range. Independent samples t-tests revealed no significant difference between Blynk and actual measurements, affirming the system's reliability. This study demonstrates the effectiveness of IoT-based prepaid metering in promoting energy accountability, operational efficiency, and consumer empowerment in local market settings.

**Keywords:** Prepaid electricity, IoT technology, esp32 microcontroller, Blynk application, energy monitoring, smart meter, wet market, real-time data, electrical load management, prepaid metering system

### **SEAIT-SR-20**

## **Overshot Waterwheel Generator at Barangay Bonfal West, Bayombong, Nueva Vizcaya**

*Novemar B. Bacsá, Xyzanne T. Libed, Patrick John L. Pastor, Marc Lionel S. Sotelo, & Wenson R. Evangelista, REE*

This study aimed to design and construct an overshot waterwheel generator at Colocol Irrigation on Barangay Bonfal West, Bayombong, Nueva Vizcaya, capable of supplying streetlights on a minor road in the area. The researchers observed that Colocol Irrigation has the potential to become a source of energy that benefits the community; hence, a prototype of an overshot waterwheel generator was presented. The testing site was a channel beside the sluice gate of the Colocol Irrigation. The testing was conducted three times a day for 4 consecutive days, and valuable data were collected. The result shows that a maximum of 30 volts dc can be generated and a current of 8.31 amperes for a stable supply load of 250 watts because the generated voltage is higher than 30 volts dc causes the inverter to shut down due to overvoltage, and the lowest generated voltage was 22.2 volts dc and a current of 2.25 amperes that supply a load of 50 watts. Still, no data was collected when the water level was too low to reach the turbine. The output load was represented by 25-watt lightbulbs connected in parallel, and the voltage was measured using the voltmeter reading on the inverter. At the

same time, the current was determined using the power formula. The overshot waterwheel has shown potential for further development to harness the Colocol Irrigation as a renewable source of energy in the area.

*Keywords:* Overshot waterwheel, generator, renewable energy, colocol irrigation

## **SEAIT-SR-21**

### **Enhanced Solar Power Generation with IoT Based Lumens Detection, Monitoring, and Control**

*Daniel R. Galasinao, Carl Uzziel J. Nicolas, Hans Kyzer D. Sabio, Jeremy O. Soria, & Jojo C. Mariano, REE*

This study proved the enhancement of solar power generation by producing a microcontroller-based Internet of Things (IoT) system. Innovated with a dual-axis solar tracking system, the model enables real-time monitoring and control that optimizes the performance of the solar panel. The new system enhances the prior home-based solar systems, incorporating IoT for optimized performance tracking and manual operation with lumens detection, real-time monitoring, and prototype testing. The prototype utilized the Design-Build-Test methodology, which administered light-dependent resistors (LDRs) along with servo motors for accurate sunlight tracking through remote management via the Blynk App. The tests revealed a reduction in voltage error to 0.24% in the calibrated system and 0.45% current error as compared to 9.21% and 84.05% in the uncalibrated system, despite varied weather conditions. Voltage ranged from 20.89V to 22.05V, dropping to 8.27V in rain, with power peaking at 37.58W in sunny conditions. For further development, implementing a dust cleaning system, battery percentage display, weather-resistant housing, and higher-capacity servo motors would enhance the reliability and efficiency of the model. Nonetheless, the IoT-based model has been proven effective in enhancing energy output and addressing environmental variability, which would support further sustainability in the Philippines. The system is set to offer a scalable model for wide-range applications, including residential and commercial solar systems.

*Keywords:* Internet of Things (IoT), microcontroller, dual-axis, servo motors, blynk, lumens detection, solar power generation

## **SEAIT-SR-22**

### **INCOED: A State-Of-The-Art Natural Sciences Facility for Research and Development at NVSU Bayombong Campus**

*Roszen Mae C. Castillo & Giancarlo Cenon C. Mendoza, RLA*

The Philippines' low Human Capital Index reflects persistent challenges in enhancing human capital, particularly in the quality of learning environments and educational infrastructure. Research indicates that well-designed, student-centered facilities have a positive impact on learning outcomes, aligning with the United Nations Sustainable Development Goal 4 on Quality Education. The Philippine Development Plan also emphasizes the importance of inclusive, equitable, and climate-resilient school infrastructure in fostering nationwide progress. In response to these priorities, Higher Education Institutions (HEIs) like Nueva Vizcaya State University (NVSU) are integrating sustainability into academic operations and campus development. NVSU, renowned for its excellence in forestry and commitment to environmental responsibility, continues to champion innovation through initiatives such as the Interdisciplinary Connect Education (INCOED) facility. This building serves as a model for collaborative, experiential learning that supports interdisciplinary education and sustainable practices. As the impacts of climate change intensify, there is a growing demand

for resilient, adaptable, and future-ready educational spaces. This study examines how sustainable academic infrastructures, such as INCOED, can contribute to human capital development, improve educational quality, and support institutional goals aligned with national and international development agendas. Ultimately, the research underscores the role of modern educational spaces in shaping a more skilled, adaptable, and environmentally conscious generation.

*Keywords:* Human capital development, sustainability, Nueva Vizcaya State University, interdisciplinary, educational infrastructure

### **SEAIT-SR-23**

#### **A Hub for Innovation: A Proposed Functional Design of a Research, Extension, and Training Facility at Bayombong, Nueva Vizcaya State University**

*Airhon Brix A. Calvario & Giancarlo Cenon C. Mendoza, RLA*

In modern higher education, university campuses are compelled to be more innovative campuses that facilitate research, innovation, and collaboration with communities. Apart from their academic roles, these institutions are also as important for society's development through their roles as knowledge producers, agricultural innovation drivers, and public service providers. With changing scholarly requirements, the need for multifunctional and sustainable environments for cross-disciplinary collaboration has been further accentuated, particularly for rural and regionally focused universities. Addressing these emerging challenges demands the deliberate incorporation of functional programming, sustainability, and architectural design. Research, extension, and training buildings should not only address operational requirements but also environmental consciousness and institutional identity. Highlighting flexibility, resource administration, and innovativeness, these buildings are critical in enhancing academic performance and regional development. This study adopted an applied design approach to examine a responsive architectural solution to these goals. Through stakeholder consultation, site and environmental analysis, and adherence to applicable design standards, the study developed an integrated architectural solution for an academic building. The output consisted of schematic plans, renderings, and technical analysis to establish the feasibility and sustainability of the solution. Ultimately, the study aimed to contribute to the larger debate on academic spaces that are future-proof, purposeful, and responsive to institutional and community aspirations.

*Keywords:* Research facility, sustainability, green campus, extension, innovation, agriculture

### **SEAIT-SR-24**

#### **DADAULO: An Integrated Aldersgate College-Quezon Campus Administration Building**

*Cj M. Magday & Tomas B. Binbinon Jr., RLA*

In order to create an environment that improves occupant well-being and productivity while encouraging sustainability, this project investigated the architectural integration of biophilic design concepts into the new administrative building for Aldersgate College – Aurora Campus. In order to create a harmonious relationship between the constructed environment and nature, the design makes use of the natural beauty of Aurora province by including aspects like natural light, ventilation, and flora. Important tactics included outdoor courtyards and terraces to promote engagement with nature, internal gardens and green walls to enhance air quality and aesthetics, and wide windows and breeze blocks to optimize natural light. To maximize sustainability and usefulness, cutting-edge technologies such as energy modeling software, Sketchup, and Enscape were employed. Informed by surveys and interviews, user-

centric design principles directed the construction of pleasant and practical rooms, while careful consideration of the site's terrain and vegetation ensured that the building matches and enriches its surroundings. The end product is a biophilic haven that serves the college's administrative requirements while offering a calm, motivating environment. This study sets a new benchmark for educational institutions and serves as a model for future projects incorporating nature into the built environment by showcasing the potential of biophilic design to convert administrative buildings into sustainable, health-promoting spaces.

*Keywords:* Biophilic Architecture, Administration Building, Aldersgate College, Sustainability, Campus Planning

## **SEAIT-SR-25**

### **KUYOG: An Integrated Agricultural Research and Learning Facility, The Aldersgate College – Aurora Campus, School of Agriculture Building**

*Schwarzen Angel O. Yacapin & Tomas B. Binbinon Jr., RLA*

Despite agriculture being a primary livelihood source in the Philippines, it is often considered an undervalued profession. To address the challenges facing the industry, this research proposes a project in Aurora, Quezon, focused on enhancing agricultural education. The goal is to create a vibrant, modern learning space for future agricultural practitioners, providing them with the necessary skills and knowledge to improve the farming economy through an integral biophilic design for a cutting-edge building complex. Utilizing a qualitative design approach, data was collected from various sources, including interviews, site visits, and design standards. The study's outcomes and framework can serve as a model for future initiatives, inspiring young people and others to enter the field of agriculture by creating a conducive learning environment. This research integrates various architectural strategies to empower future Filipino farmers by establishing a sustainable community and training ground to cultivate their passion and drive them towards success, thereby boosting the Philippine agricultural sector. Furthermore, acknowledging the importance of college campuses in shaping future professionals and serving the community, this study offers a design solution for the new Aldersgate College campus as a Semi-Agriculture School. The proposed design for the Agricultural Research Center within the campus was informed by data gathered through consultation, site visits, architectural literature, and relevant resources. This data was analyzed to facilitate the design process, employing an applied research approach. The study culminates in a comprehensive design solution, including architectural plans, elevations, sections, and perspectives, enriched by market analysis, technical assessment, financial evaluation, management studies, socio-economic analysis, and environmental assessment.

*Keywords:* Integral, Biophilic, Campus, Agriculture School, Aldersgate College, Agricultural Research Center

## **SEAIT-SR-26**

### **Library as a Living Space Redefining Student-Centric Design in Academic Institutions**

*Kenneth Jev D. Cristobal & Tomas B. Binbinon Jr., RLA*

Libraries are often perceived as mere repositories of books and most people treat these structures as places to pass the time, rest, or escape the scorching heat. In addition, traditional libraries are underutilized as these places struggle to keep up with the rapid advancement of technology and being neglected by the society, as information can now be accessed anytime and anywhere with just a single click. This study examined the integration of biophilic design principles into the new campus library of Aldersgate College– Aurora Campus, aiming to redefine the traditional library function through innovative spaces that fosters interaction, collaboration, and intellectual growth. Embracing the natural

beauty of the site, the design harmonizes natural elements mainly natural lighting and ventilation through its wide openings, and greenery to establish a connection between educational landscape and nature. Key strategies include flexible spaces designed both for learning and social engagement. The envisioned campus library enhances its traditional function as a storage of books, transforming into an inviting learning environment that nurtures curiosity and serves as a bridge to new ideas. In addition to key strategies, this study explored color theory within its spaces, the design stimulates students' curiosity while creating a more relaxing atmosphere, particularly in reading areas, where carefully chosen colors enhance focus, comfort, and engagement. This study highlights the potential of biophilic design to transform libraries into inclusive, and sustainable spaces, setting a new standard for educational institutions and serving as a model for future projects that integrate nature into the learning environment.

*Keywords:* Biophilic Design, Flexible Spaces, Color Theory, Learning Environment, Interactive Learning, Campus Planning, Library Design

## **SEAIT-SR-27**

### **Sadiri: Integrating a Holistic Design Approach for Aldersgate Divinity School Campus**

*Mark Cleo M. Jamias & Tomas B. Binbinon Jr., RLA*

This study investigates the integration of biophilic design principles into the proposed Divinity School and chapel at Aldersgate College – Aurora Campus. The project seeks to enhance occupant well-being, spiritual engagement, and productivity while advancing environmental sustainability. The design incorporates key biophilic elements such as natural ventilation, daylighting, shadow play, and vegetation to establish a strong connection between people, architecture, and nature. Architectural features—including large windows, ventilation bricks (Cabogo), canopies, louvers, and skylights—were strategically implemented to improve airflow and natural light distribution. Additionally, the inclusion of green walls, interior gardens, parks, terraces, and courtyards fosters aesthetic value, community interaction, and restorative experiences. The design process was supported by digital modeling tools such as SketchUp, Enscape, and Lumion to ensure that the resulting spaces are functional, sustainable, and visually compelling. A comprehensive site analysis and sensitivity to local context ensured architectural harmony with the existing environment. Design decisions were informed by interviews and site visits, emphasizing a user-centered approach that prioritizes comfort, satisfaction, and spiritual formation. Ultimately, the study demonstrates that biophilic integration can transform educational environments into calming, inspiring spaces that promote mental health, ecological awareness, and holistic development. The proposed model serves as a reference for future institutions seeking to align architectural innovation with human and environmental well-being.

*Keywords:* Aldersgate College, biophilic architecture, campus planning, divinity school ventilation bricks

## **SEAIT-SR-28**

### **ECOSPORT: An Integrated Recreational Sports Park at Aldersgate College**

*Kian James Mart J. Ronco & Tomas B. Binbinon Jr., RLA*

Sports facilities play a significant role as a socio-ecological activity for many regions. This project, designing a sports facility at Aldersgate College, aimed at optimizing space usage, functionality, and engagement while promoting physical, mental, and social well-being among users. The research focuses on creating a multifunctional sports facility that integrates sustainability, inclusivity, and biophilic design

principles. By optimizing space usage and fostering a positive, engaging environment, the facility is intending to promote student development, creativity, active learning. The outdoor areas are designed for both fitness and relaxation, optimizing space usage to meet diverse needs. The study adopts a mixed-methods approach to data gathering, including design evaluation, case study analysis, site visit and participatory design methods. Findings indicate that the proposed inclusive sports facility will not only improve physical accessibility but also to provide a valuable insight for future projects aimed at designing sports facilities that foster learning, engagement, and community development. This research integrates various architectural approaches to create a multifunctional space, the facility sets a precedent for universal design that has sustainable and inclusive environment. Ultimately, the facility may contribute to creating a more engaged and healthy community, strengthening the role of sports in the educational experience and promoting well-rounded student growth.

*Keywords:* Sports Facility Design, Aldersgate College, Space Optimization, Biophilic Design, Multifunctional Spaces, Educational Architecture, Participatory Design, Outdoor Fitness and Relaxation.

### **SEAIT-SR-29**

#### **KABALIKAT: A Proposed Three-Storey Executive Building Extension at Capitol Bayombong, Nueva Vizcaya**

*Reneil S. Madronio & Tomas B. Binbinon Jr., RLA*

The Nueva Vizcaya Provincial Capitol's current administrative building faces decentralization and insufficient storage space, leading to inefficiency and disorganization. To address these issues, a three-story executive building extension is proposed, tailored to the needs of ten departments, including the Provincial Water Works Services and Persons with Disability Affairs Office. Incorporating biophilic design principles, the extension will feature natural elements like large windows, greenery, and living walls to enhance employee well-being, creativity, and productivity. Research through interviews, site visits, and case studies confirms that the new design will optimize workflows, balance workspaces, and improve administrative efficiency. This project aims to foster community ties, support economic growth, and create a healthier, more productive work environment.

*Keywords:* Administrative efficiency, biophilic design, government operations, workplace productivity, employee well-being

### **SEAIT-SR-30**

#### **Synergistic Design for Level 3, Four-Storey Hemodialysis Center: Integrating Biophilic and Bioclimatic Architecture at Region II Trauma and Medical Center**

*Zyra Joy B. Candelaria & Tomas B. Binbinon Jr., RLA*

This thesis focuses on addressing the critical issue of bed shortages in the hemodialysis unit at the Region 2 Trauma and Medical Center (R2TMC) by proposing a sustainable and innovative four-storey hemodialysis facility. The rising demand for dialysis services in the region necessitates an expansion of existing infrastructure to accommodate more patients and improve service delivery. This study employs a design approach that integrates biophilic and bioclimatic architectural principles, emphasizing patient well-being, operational efficiency, and environmental sustainability. Biophilic design is utilized to create a healing environment

by incorporating natural elements such as light, ventilation, and greenery, fostering a calming atmosphere that promotes faster recovery, reduces stress, and enhances the overall patient experience. Meanwhile, bioclimatic strategies focus on optimizing energy efficiency, water conservation, and indoor air quality through climate-responsive design, reducing the facility's carbon footprint and operational costs. Together, these approaches provide a holistic solution that balances functionality, aesthetics, and environmental responsibility.

*Keywords:* Hemodialysis, biophilic design, bioclimatic architecture, sustainable healthcare, R2TMC

### **SEAIT-SR-31**

#### **A Proposed Level 3, Four-Storey Hemodialysis Building at Region II Trauma and Medical Center, Embracing Adaptive-Kinetic Architecture**

*Monica Rose M. Paras & Tomas B. Binbinon Jr., RLA*

The rising prevalence of chronic kidney disease (CKD) in Region II of the Philippines, coupled with insufficient healthcare infrastructure, has created a critical demand for hemodialysis services. To address this gap, the proposed four-story hemodialysis facility at the Region II Trauma and Medical Center incorporates adaptive-kinetic architecture—a cutting-edge approach that integrates dynamic and sustainable design features. This innovative design prioritizes patient comfort, operational flexibility, and energy efficiency. Equipped with state-of-the-art dialysis machines and operated by highly trained staff, the facility will meet Level 3 hospital standards and comply with Department of Health (DOH) guidelines to deliver exceptional care. The adaptive design includes flexible spaces and an energy-efficient façade, enhancing patient satisfaction while reducing operational costs. Moreover, the project emphasizes sustainable infrastructure development, aligning with global sustainability objectives. By addressing the treatment challenges of CKD and promoting patient-centered care, the facility exemplifies resilience and environmental responsibility. This study demonstrates how creative architectural concepts can be seamlessly integrated into essential healthcare infrastructure, offering a forward-thinking solution that balances functionality, sustainability, and high-quality patient care.

*Keywords:* Chronic Kidney Disease (CKD), hemodialysis, adaptive-kinetic architecture, patient-centered care

### **SEAIT-SR-32**

#### **TERMINUS: A Modern Integrated Terminal**

*Alyssa Maristel T. Sales & Irone jay C. Diozo, UAP*

Transportation terminals play a vital role in public services, acting as crucial hubs that connect communities to various destinations both locally and beyond. In Solano, recognized as a center for commercial transportation, rapid population growth, and urbanization have rendered existing terminals increasingly inefficient in meeting the community's evolving needs. This project proposes the development of an innovative integrated terminal designed to

accommodate diverse service vehicles while addressing the functional and comfort requirements of passengers. The proposed terminal, named **The Terminus**, features modern amenities such as restrooms, offices, retail spaces, and enhanced security measures, ensuring greater efficiency, convenience, and comfort for users. The design draws inspiration from modern architectural principles while incorporating distinct vernacular elements, emphasizing the use of locally sourced, energy-efficient, and climate-resilient materials. These materials not only adhere to contemporary design aesthetics but also align with sustainability goals, addressing the challenges posed by climate change. By integrating advanced structural solutions and passenger-focused amenities, the project aims to improve the terminal's operational functionality and enhance the overall travel experience. Additionally, the incorporation of modern design principles offers the terminal a refreshed, visually appealing aesthetic while maintaining its relevance to the local cultural context. This study presents a forward-thinking approach to transportation infrastructure, balancing innovation, sustainability, and cultural sensitivity to meet the demands of a growing and dynamic community.

*Keywords:* Transportation terminal, modern design, vernacular architecture, energy-efficient, integrated

### **SEAIT-SR-33**

#### **KAPPIA: Redevelopment of Ambaguio's Sky Escape 360 to a Paragliding Sports and Recreational Hub**

*Maylene N. Padillo & Tomas B. Binbinon Jr., RLA*

The Philippines, renowned for its natural beauty and rich cultural heritage, has emerged as a prominent tourist destination in Southeast Asia. Amidst the lush landscapes and vibrant traditions, architecture stands as a cornerstone of the nation's allure, shaping both its historical narrative and contemporary identity. This research paper endeavors to delve into the multifaceted role of architecture in driving tourism in the Philippines.

Paragliding and scenic viewpoints play pivotal roles in the vibrant tapestry of tourism in the Philippines, offering unique experiences that blend adrenaline-pumping adventures with breathtaking natural beauty.

This study explores the synergistic integration of paragliding and scenic tourism in Nueva Vizcaya, leveraging architectural interventions to create a holistic recreational destination that appeals to a diverse audience. By focusing on the development of facilities and infrastructure, architecture emerges as a transformative tool in enhancing accessibility and enriching the visitor experience.

Central to this endeavor is the creation of multifunctional spaces that not only serve the needs of paragliders but also celebrate the natural beauty of the region, enticing tourists to explore its breathtaking landscapes. Through thoughtful design, existing facilities are repurposed and expanded to accommodate training areas, viewing platforms, and recreational amenities, seamlessly blending adventure sports with leisure activities.

In conclusion, by harnessing the potential of architectural design, Nueva Vizcaya's paragliding site evolves into a vibrant hub of adventure and exploration, enticing tourists and locals alike to experience the thrill of flight amidst breathtaking scenery. Through sustainable development and inclusive design, architecture becomes a catalyst for unlocking the full potential of paragliding and scenic tourism, leaving a lasting legacy for generations to come.

*Keywords:* Adventure, Tourism, Scenic, Development, Paragliding

## SEAIT-SR-34

### **PAAW: Portable Assistant for Animal Welfare, a Decision Support System for the Provincial Veterinary Services Office of Nueva Vizcaya**

*Camille Jesmin B. Naces, Hendre Leigh O. Sagabaen, Melbraei B. Santiago, Angel Hamelton O. Yacapin, & Rocel Audrey J. Batara, MIT*

The Portable Assistant for Animal Welfare (PAAW) is an innovative support system designed for the Provincial Veterinary Services Office of Nueva Vizcaya. Developed using the MERN stack (MongoDB, Express, React, Node.js), PAAW is a single-page progressive web application (PWA) aimed at enhancing operational efficiency across core divisions, including Livestock and Poultry Development, Animal Healthcare and Management, Regulatory and Monitoring, and Administrative functions. The system was created following the Rapid Application Development (RAD) methodology, emphasizing iterative prototyping to ensure a user-centered, responsive, and functional platform. PAAW integrates several key features, such as streamlined data collection, offline accessibility through CSV export, and data visualization using Chart.js, which enables users to analyze and manage information efficiently. Its architecture leverages cloud storage, providing flexible data handling capabilities and ensuring seamless functionality for both desktop and mobile users. The system was evaluated by 13 participants, comprising 4 administrative personnel, 7 operational staff from various divisions, and 2 IT experts. Their feedback confirmed that PAAW effectively addresses the practical needs of its users. An ISO 25010:2015 assessment was conducted, yielding an overall mean score of 4.40, which indicates a high degree of compliance with the quality characteristics outlined in the standard. This result demonstrates that PAAW successfully meets its specified requirements and delivers a robust and efficient solution for veterinary service operations.

*Keywords:* Animal welfare, decision support system, veterinary services, MERN stack progressive web application

## SEAIT-SR-35

### **JEEP-PS: Enhancing Modern Public Utility Jeepney Operations through Advanced Tracking and Arrival Information for the Ifugao Transport Service Cooperative**

*Liezel Mae P. Araos, Mc Osmund Caesar L. Espejo, Raizel Joy E. Lapada, Rayne Angelica O. Naval, Noemi Shane R. Puyales, & Teofilo M. Sagabaen, RECE*

“JEEP-PS: Enhancing Modern Public Utility Jeepney Operations through Advanced Tracking and Arrival Information for the Ifugao Transport Service Cooperative” is designed to modernize and streamline jeepney operations. This project introduces a system that provides advanced tracking and accurate arrival information, improving operational efficiency and commuter experience. The goal is to create a platform that addresses the needs of administrators, operators, drivers, and commuters while ensuring ease of use and reliability. The researchers adopted the Prototype Model, a development methodology emphasizing iterative design and continuous stakeholder feedback. Data collection methods included interviews, questionnaires, and observation to gather insights on system requirements and challenges in current jeepney operations. The study engaged 1 admin, 1 operator, 2 drivers, 10 commuters, and 1 IT expert, selected through purposive sampling. The system was developed using React.js, Node.js, Express, MongoDB, CSS3, and C++, with development carried out on Visual Studio Code. Hardware components included Arduino Uno, SIM-900A, GPS module, GPS antenna, and LCD module, integrated to ensure precise data collection and user interaction. A web server was implemented to manage system operations and data exchange effectively. The researchers believe that the JEEP-PS system

will significantly enhance public transport management by providing advanced tools for tracking, route planning, and commuter information. By leveraging modern technology, the system offers improved reliability and service quality for the Ifugao Transport Service Cooperative and its users.

*Keywords: Arduino Uno, GSM Module, GPS Module, Public Utility Jeepney*

## **SEAIT-SR-36**

### **GradLink: Alumni Tracer and Record Management System for the School of Graduate Studies of Saint Mary's University**

*Nhizza S. Nueva, Jericho T. Pineda, Jo Arman Ken N. Quiambao, Marc Edison D. Suarez, & Adonis V. Garces, DIT*

GradLink is a web application developed for the School of Graduate Studies at Saint Mary's University to simplify and improve student and alumni record management, utilizing the MERN stack (MongoDB, Express, React, Node.js) and technologies like TypeScript, Tailwind CSS, and Docker. Following the Rapid Application Development (RAD) methodology, the application focuses on managing student and alumni records and facilitating alumni tracing with tools for data collection and visualization using Radix UI charts. Evaluated by 2 administrative staff, 4 department heads, and 3 IT experts, the system was assessed for ISO 25010 compliance, achieving an overall mean rating of 4.42, indicating high compliance and effectiveness in improving record management efficiency, enhancing alumni tracking, and providing a strong technical foundation for future growth and is expected to strengthen alumni engagement and support institutional record-keeping.

*Keywords: Alumni tracer, graduate studies, attrition rate, record management, rapid application*

## **SEAIT-FR-01**

### **Geotechnical Investigation of Quarry Sites along the Magat River: Towards an Evidence-based Regulations and Guidelines Compliant to DPWH Standards**

*Engr. Jefrie T. Alindayu, RMP, MSCE, Engr. Michelle Kyra S. Bautista, MECE, Engr. Rod Kline M. Perpetua, RMP, MECE, ME1, Engr. Andres P. Gualon Jr., MSCE, & Engr. Jackson R. Morales*

Construction materials are integral to the construction industry. Concrete is the most commonly used building material in the country because it provides strength, stability, and variety for modern buildings and other infrastructure projects. This is commonly used specifically in building construction, retaining structures, flood control projects, irrigation systems, dams, roads, highways, and other projects. Concrete has become the material of choice for structural components due to its undeniably strong features and ability to withstand cracks, especially when paired with steel. It's made up of cement, aggregates, water, and other elements. Aggregates serve as the building blocks of construction, enabling the creation of sturdy foundations, resilient structures, and efficient transportation networks. In the region, aggregates along the Magat (Cagayan) River have likely been the main source of construction materials. In the report published by the NEDA regional development council in 2006, Nueva Vizcaya has a production area of 35 hectares with an extraction rate of 280,060 cubic meters of sand and gravel. The study aimed to investigate the geotechnical (aggregate) properties of five quarry sites along the Magat River in Nueva Vizcaya Province. The different laboratory

tests, such as Particle Size Distribution Analysis, Aggregate Strength Testing using Abrasion Test, Durability Assessment, Specific Gravity and Water Absorption were conducted to assess the suitability of the aggregates for various construction applications. The results showed that some sites meet the required specifications and standards set by the Department of Public Works and Highways (DPWH). Among the five quarry sites, Macated Section was found most recommended for different types of concreting and engineering related works.

*Keywords:* Aggregates, geotechnical investigation, quarry sites, and durability assessment  
**SEAIT-FR-02**

### **Appraising a Higher Education Institution's Waste from Electronic and Electrical Equipment (WEEE) Management Practices: Towards a Sustainable Plan for Mitigating Risks**

*Gertrude G. Danao, PhD, Mildios Meeds Ciriaco Blando, BSIT, Irish E. Reginalde, MBA, Carina S. Mallillin, MSCE, & Sheila Marie G. Gilo*

Educational institutions heavily depend on EE, particularly on Information Communication and Technology (ICT) equipment and other electronic devices to enhance teaching and learning (Dayaday & Galleto, 2022; Iyer, 2018). However, when these devices reach their end-of-life, they become obsolete or fall out of use, they transform into e-waste – a significant and rapidly growing waste stream worldwide that demands urgent attention. E-waste is classified as hazardous waste and poses risks to both human health and the environment if not properly managed and disposed of. To address critical issues, it is imperative to formulate and implement a sustainable e-waste management plan. The researchers made use of data-gathering methods including survey questionnaires, interviews, document reviews, and observations. To formulate the sustainable e-waste management plan the researchers (a) gathered information on the types and quantities of e-waste generated by the institution in a year; (b) reviewed current inventory practices on e-waste collection and disposal procedures; (c) assess stakeholders' awareness level regarding e-waste management; (d) identify existing initiatives related to e-waste within the institution; (e) employ descriptive statistics and content analysis to analyze the collected data; and (f) crafted a sustainable management plan to serve as blueprint for implementation. The plan included guidelines and policies for proper e-waste handling and disposal. It also includes the economic benefits of e-waste, such as recycling e-waste materials, contributing to environmental protection and financial sustainability. By implementing the e-waste management plan, it can help mitigate risks associated with improper e-waste handling, safeguard human health, and protect the environment.

**SEAIT-FR-03**

### **Enhancing Regional Transformation: Recalibrated On-Site Diversified Planning and Design in Region 2**

*Liberty A. Rosario, LPT, PhD, Candido Joseph T. Rosario Jr., RCE, MECE, MBA, Carmelo T. Andrada, RCE, Amalia Jean M. Castillo, RCE, Arleen V. Domingo, RCE, & Jocelyn Carag, LPT, PhD*

The study is a focal pillar extended towards societal transformation in a specific milieu along the provision of on-site diversified planning and design in Region 2. Formidable to the education, training, and the road to professionalism in the Civil Engineering is an ever-evolving commitment that indubitably contributes to the survival and growth of man's institutions, culture and civilization. Hence, the enhancement intervention greatly highlights the immense partnership and collaboration amplified and recalibrated through sustainable civil engineering tasks and responsibilities. More than ever, this study revealed the immense impact of both the private and public sector to complement each other to satisfy the evolving needs of humanity. Civil engineering and other engineering

programs together with the selected partners in the industry play crucial role in steering societal transformation vis-a-vis planning and design that are sustainable. Comprehending civil engineer's crucial role in promoting sustainable construction practices is becoming increasingly essential as the globe faces severe environmental economic concerns. This study surfaced the civil engineers and other engineering completers and graduates pivotal role in promoting sustainable concrete construction, highlighting the need for their expertise in creating environmentally friendly and resilient infrastructure. The program has been made feasible with the cooperation of government, non-government and private corporations/organizations which were willing to share their facilities and resources. It is therefore imperative for the school to establish the necessary linkages with these corporations and organizations. The study further unfolded the importance of procurement rules in endorsing sustainable development, emphasizing the need for well-crafted policies and guidelines that incentivize eco-friendly practices as well as procedures needed along internship. The possible collaborative efforts between civil engineers and policymakers are highlighted as a fundamental driver for sustainable plan and design in the multi -faceted era.

*Keywords:* transformation, planning, design, recalibrated, sustainable

#### **SEAIT-FR-04**

### **Collaborative robots' productivity effects in post-harvested citrus fruits of Nueva Vizcaya, Philippines**

*Engr. Teofilo M. Sagabaen, Engr. Angelino A. Pimentel, Engr. Gerene-Leigh C. Almazan, Leopoldo C. Namuhe, & Renann G. Baldovino, PhD*

Citrus fruit production in Nueva Vizcaya, the Philippines' Citrus Capital, is a vital economic activity. However, post-harvest procedures like as sorting, waxing, packaging, and palletizing are labor-intensive and pose health risks to workers. Although there is a growing interest in collaborative robots (cobots), there has been no empirical investigation on their use in citrus post-harvest procedures in the region. This study employs a single-group pretest-posttest quasi experimental method to assess the productivity impact of cobots in citrus waxing operations. Semi-structured interviews, direct observation, and video recordings at LCN Farms indicated waxing as the most suitable for cobot intervention. We used Agile approach to create an electronic control circuit, 3D-printed a custom citrus-gripper end-effector, and customized cobot task code for waxing. Workflow and performance measurements were collected before and after cobot integration. SPSS analysis showed non-normal data (Shapiro-Wilk  $p = 0.003$ ), prompting the usage of the Mann-Whitney U test to compare cobot-assisted with standard workflows. The preliminary findings pave the way for carefully evaluating efficiency gains, safety enhancements, and possible economic benefits. This research outlines a reproducible methodology for integrating cobots in post-harvest citrus operations, providing actionable insights for growers in Nueva Vizcaya and beyond.

*Keywords:* cobots, food industry, efficiency, human-robot interaction

**Research Unit: School of Health and Natural Sciences**

**Research Coordinator: Geraldine Y. Ferreras & Cathelyn C. Mariano**

**Panel of Reviewers:**

| <b>Area of Specialization</b>                            | <b>Name of Faculty</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Natural Sciences</b>                                  | Lorna C. Aban, LPT, MAEd<br>Robert S. Aceret, MA<br>Gloria Vicky A. Antonio, MEd.<br>Olivar Reimos D. Barroga, LPT<br>Alicia Z. Jubay, MAT<br>Cathelyn C. Mariano, LPT, MA<br>Jason Arnold L. Maslang, LPT, MBS, MAT<br>Arlene L. Tabaquero, LPT, PhD<br>Regidor L. Almendral<br>Jaryl Kate T. Dinamling, MS<br>Gabrielle Christoph E. Eraña<br>Hanson T. Villanueva, MA                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Medical Laboratory Science</b>                        | Aubrey Baby Ruth D. Nidea, RMT<br>Maria Shiela M. Ramos, RMT<br>Justine Bill Vicente, RMT<br>Ronnie C. Dumale, LPT, RMT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Pharmacy</b>                                          | Melchora M. Bautista, RPH, MS Pharm<br>Veronica Pauline R. Belen, RPH<br>Brent Jericko P. Narciso, RPH<br>Ma. Victoria B. Wance, RPH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Nursing</b>                                           | Kristine G. Alejo, RN, MSN<br>Fernando P. Andrada, RN, MSN<br>Mary Antoinette B. Aseron, RN, MAN<br>Joman J. Baliton, RN, PhD<br>Sherylou A. Benig, RN, PhD<br>Anne Margaret C. Botor, RN<br>Peter-Tom A. Callang, RN, MAN<br>Jezerel C. Credo, LPT, RN<br>Marie Jane T. Cunanan, RN, MSN<br>Thelma D. Delos Reyes, RN, MSN<br>Jake N. Fabian, LPT, RN<br>Geraldine Y. Ferreras, RN, MSN<br>Rolita Grace V. Garcia, RN, RM, MSN<br>Molly Aivon A. Guerrero, RN<br>Mary Rose C. Jontilano, RN, MSN<br>Marissa Lyn A. Labangcoc, RN, MSN<br>Leycel F. Marzan, RN, MSN<br>Alfer Jhun G. Navarro, RN<br>Anabelle A. Orpiano, RN, RM, MSN<br>Elery Michelle C. Quiben, RN, MSN<br>Jaylord S. Saragosala, RN<br>Joan B. Taroma, RN, MSN<br>Mayer L. Tominez, RN, MSN<br>Maria Murtle Ellah R. Vaquilar, RN |
| <b>Guest Panel from Teacher Education and Humanities</b> | Kenneth L. Maslang, MAEd<br>Henry F. Gamboa, PhD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|  |                                                                                                                                                                                                                                                                  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Gerome H. Bautista, LPT, MST<br>Melanie G. Gurat, PhD<br>Florence N. Bahni, LPT, RPm, MAEd<br>Reiner B. Dulawan RPm, MAEd<br>Rowena A. Rivera, LPT, MAT<br>Samuel Damayon, JD, MA<br>Edwin Edilberto N. Mania, Reg. GC, EdD<br>Allen Christopher S. Marquez, PhD |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**SHNS-SR-01**

## **Awareness of Senior Citizens on the Implementation of Republic Act 9994 in Bayombong, Nueva Vizcaya**

*Dave V. Licuanan, Bridgette Charise T. Cetra, Jennifer C. Grifaldo, Leah Ann M. Sarmiento, Loisa Fe W. Aquiangan, & Mary Rose C. Jontilano, MSN, RN*

Despite its long-standing implementation, some senior citizens encounter challenges in fully accessing the benefits of Republic Act 9994 (RA 9994) due to opportunities for enhanced coordination between government agencies, broader information dissemination, and more active Barangay Senior Citizens Associations. This study aimed to assess the awareness of senior citizens regarding the implementation of RA 9994, also known as the Expanded Senior Citizens Act of 2010, in Bayombong, Nueva Vizcaya. The law provides various benefits, such as discounts, tax exemptions, and government assistance programs to senior citizens. Using a quantitative, descriptive comparative approach, this study examined the awareness levels of 171 senior citizens which is conducted in Barangay Salvacion, Bonfal West, and Bonfal Proper, Bayombong, Nueva Vizcaya, and how demographic factors such as sex, educational attainment, living arrangements, and pension eligibility influenced their knowledge of the law's provisions. Results revealed that while most respondents were moderately aware of transportation discounts, awareness of other benefits, like funeral and burial assistance, tax exemptions, and utility discounts, was low. Notably, educational attainment was a significant factor, with seniors who had higher education demonstrating a better understanding of their benefits. Other demographic factors, including sex, living arrangements, and pension eligibility, did not significantly affect awareness levels. These findings highlight the need for improved information dissemination and community engagement to ensure that all senior citizens, especially those with lower educational backgrounds, are fully aware of and able to utilize the benefits provided by RA 9994.

*Keywords:* senior citizens, ra 9994, awareness, benefits, discounts, tax exemptions

### **SHNS-SR-02**

#### **Level of Acceptability and Credibility on Health-Related Information Disseminated Through Social Media among SMU SHANS Freshmen**

*Gabudao, Robinson Earl, Lunag, Jei Chiro, Monayao, Jannin Kaye, Yaguel, Verabelle Mhyrtelle, & Elery Michelle C. Quiben, RSN, MSN*

The digital era has dramatically expanded access to health-related information via social media platforms. Yet, the risk of encountering misinformation or unreliable content persists. This study assessed the level of acceptability and credibility of health-related information disseminated through social media among first-year students of the School of Health and Natural Sciences (SHANS) at Saint Mary's University, Bayombong, Nueva Vizcaya. A quantitative, descriptive-comparative design was employed: 245 freshmen completed a 4-point Likert-scale questionnaire based on established frameworks for acceptability and credibility. Overall findings indicate that SMU SHANS freshmen express a positive acceptance and perception of health information from social media. However, lower ratings for self-efficacy, ethicality, and dynamism indicate that students face challenges in applying the information, discerning ethics, and engaging in presentations. Analysis showed no significant gender differences; however, significant differences emerged across different courses, with Biology students reporting higher perceived effectiveness and self-efficacy compared to other students. The study concludes that although SHANS freshmen generally accept and trust health information from social media, there remains the need to enhance their critical evaluation skills and ethical awareness, suggesting the significance of tailored digital health literacy interventions. The research then suggests exploring how academic progression, particularly in health fields,

might influence students' critical evaluation and use of this information, potentially improving their ability to assess its credibility and ethical implications. Further suggestions include investigating the impact of clinical experience and expanding the scope to include comparisons across different demographic groups and specific social media platforms, ultimately aiming for a more comprehensive understanding of students' engagement with online health content.

*Keywords:* digital era, misinformation, unreliable content, positive acceptance, perception

### **SHNS-SR-03**

#### **Awareness of a Reproductive Population on Genetic Disorders and Congenital Birth Defects: Basis for Maternal Counselling Activities**

*Jasmine Joyce P. Batang-oy, Arvie Bless Claire A. Batalla, Chrichen B. Tindungan, & Alicia Z. Jubay, MAT*

Genetic disorders and congenital birth defects significantly affect health and living conditions. This study aimed to determine the awareness level of the reproductive population regarding genetic disorders and congenital birth defects. A descriptive correlational quantitative research design was used to assess the respondents' awareness and identify relationships between variables. A sample of 200 respondents from the Barangays Quirino, Roxas, Aggub, Osmena, and Quezon of the municipality of Solano, Nueva Vizcaya was conveniently selected for the study. Descriptive statistics were used to determine the levels of awareness. Pearson's correlation coefficient was used to examine the correlation between the awareness levels of participants on genetic disorders and congenital birth defects. The findings indicate that the reproductive population respondents are generally slightly aware of genetic disorders and congenital birth defects, both on the basic concepts and risk factors for the two themes. The participants' level of awareness of genetic disorders is associated with their awareness of the basic concepts and risk factors of congenital birth defects. Thus, a need to enhance and clarify their understanding of the concepts and risk factors on said themes. The provision of strategic activities like maternal counseling and other information-dissemination endeavors can be considered to increase awareness and understanding, and eventually, develop among the reproductive population's wise and informed decision-making and encourage preventive actions.

*Keywords:* genetic counselling, genetic concepts, risk factors, developmental anomalies, maternal counseling

### **SHNS-SR-04**

#### **Practices and Adherence to Antibiotic Use of Barangay Salvacion, Bayombong, Nueva Vizcaya Residents**

*Macaraeg, Edrick G., Castillo, Yvonne P., Corpuz, Ivy O., Rola, Ashley M., Viernes, Anna Angela D., & Guerrero, & Molly Aivon A., RN, MAN*

Antibiotic resistance remains a critical global health threat, as declared by the World Health Organization, due to its implications for public health, food security, and development. The rise in antimicrobial resistance (AMR) is primarily linked to inappropriate antibiotic usage and poor adherence to prescribed treatments. In rural areas such as Barangay Salvacion, these behaviors are influenced by a range of contextual factors. This study examines local antibiotic use and adherence practices to create effective health education interventions. Employing a qualitative-descriptive design guided by Nola Pender's Health Belief Model, data were gathered through interviews with 11 residents and analyzed using Braun and Clarke's Thematic Analysis. Findings revealed that while many residents obtain antibiotics through pharmacies following physician consultations, others rely on unauthorized sources, such as sari-sari stores or leftover medications at home. Particularly, public awareness and knowledge gaps regarding antibiotic use influence the residents to engage in self-medication, premature discontinuation of treatment regimens, disposal practices, and retention of unused supplies. Additionally, residents often depend on social media and informal networks for health information, which perpetuates misinformation. Only a few participants reported full adherence to prescribed regimens or awareness of the risks of resistance due to early discontinuation or dose alterations. These key findings guided the creation of targeted health education materials distributed within the community. Hence, these results suggest stricter implementation of antibiotic distribution regulation and safe disposal, along with widespread public awareness campaigns in communities to address misinformation by providing clear and correct information from healthcare providers and trusted sources.

*Keywords:* Antibiotic adherence, Antibiotic resistance, Antimicrobia resistance (AMR), community-based intervention, public health education, self-medication, unauthorized antibiotic distribution

## **SHNS-SR-05**

### **The Level of Awareness on Telehealth Availability among Pregnant Clients of Bayombong, Nueva Vizcaya**

*Palisoc, Jordaine Lynette A., Castro, Micaella Mae D., Sagario, Fitz Gerald G., Salvador, Kharylle Marriane H., Tegui-In, Nikka Aubrey C., & Ferreras, Geraldine Y., RN, MSN*

Telehealth has emerged as a transformative approach in healthcare delivery and is gradually being adopted in the Philippines. Despite its growing relevance, there is a lack of studies assessing awareness of existing telehealth services in Nueva Vizcaya. This study aimed to evaluate the level of awareness of pregnant clients regarding telehealth availability in Bayombong, Nueva Vizcaya—a vulnerable population with a constant need for maternal care—and to determine the correlation between their awareness levels and demographic profiles, including age, location, educational attainment, and income. A quantitative, descriptive-correlational research design was employed, involving 139 pregnant clients aged 10–49 in their first or second trimester, selected through stratified random sampling across 25 barangays. Data were collected face-to-face from September 2024 to January 2025 using a structured and reliable questionnaire (Cronbach's alpha  $\geq 0.91$ ), adapted from Z & S (2018) and Department of Health (2022). Results showed moderate awareness in general knowledge (Mean = 2.78), provider (Mean = 2.64), and requirements (Mean = 2.85), but lower awareness in scheduling (Mean = 2.33) and contact platforms (Mean = 2.37). Significant correlations were found between awareness and both age ( $\rho = 0.185$ ,  $p = 0.029$ ) and educational attainment ( $\rho = 0.172$ ,  $p = 0.043$ ), while no substantial relationship was observed with location or income. The finding underscore the need for enhanced information dissemination through community based education and digital outreach. An Information, Education, and Communication (IEC) material was developed to support awareness initiatives and strengthen

institutional collaboration, ultimately aiming to improve maternal healthcare access and telehealth utilization.

*Keywords:* Awareness, Pregnant Clients, Telehealth

## **SHNS-SR-06**

### **Sleep Quality of Municipal Health Workers of Lying-In Clinics in Nueva Vizcaya**

*Casuga, Aprilida Mae E., Constantino, Pamela Joyce S., Ebor, Lailanie B., Huan, Jerika Shekinah Mei T., Vergel de Dios, Kaizher Angel R., & Jontilano, Mary Rose C., RN, MSN*

Sleep problems affect 45% of the global population, posing risks to health, relationships, and workplace performance. In the Philippines, over half of respondents face sleep issues, with healthcare workers particularly impacted due to stressors and demanding schedules. Using a quantitative descriptive-comparative design, this study aimed to understand sleep quality factors and their effects, focusing on municipal health workers in some municipalities in Nueva Vizcaya. The study profiled purposively selected health workers in MHOs in lying-in clinics in Nueva Vizcaya by various demographics and analyzed their sleep quality (efficacy, latency, duration, disturbance, medication, subjective quality, daytime dysfunction). It also compared sleep quality across profiles and produced IEC material on sleep quality as an outcome. Researchers conducted one-on-one interviews, ensuring confidentiality and informed consent and a survey questionnaire to gather data. Results shows that most of the respondents are middle-aged, female, college graduates, and nurses. Over half have mid-career service, and nearly half can save sufficiently. In terms of sleep quality, 60.4% experience poor sleep quality, with issues like delayed sleep, short duration, and disturbances. Age and socio-economic status affect sleep quality, while sex, job position, and service length do not. Strategies such as health assessments, sleep initiatives like consistent routines and stress management, community support, and further research are recommended to explore contributing factors and interventions.

*Keywords:* Healthcare workers, occupational health, sleep interventions, sleep problems, sleep quality

## **SHNS-SR-07**

### **Student Nurses' Perception of Factors Influencing the Clinical Learning Environment: Basis for a Supplementary Material**

*Gregorio, Princess H., Manzanillo, Justine, Sumabat, Raizah Thea A., & Antonio, Gloria Vicky A., MEd*

The clinical learning environment (CLE) is an essential element of nursing education, greatly affecting students' competence, self-assurance, and readiness for professional practice. Despite its importance, few studies have focused specifically on the CLE, with most research addressing nursing education in broader terms. Furthermore, gender-based variations in clinical learning experiences remain underexplored. To address this gap, this study aimed to explore the perceptions of fourth-year nursing students at Saint Mary's University regarding the factors that influence the CLE and to create supplementary materials to improve their clinical learning experience. A descriptive-comparative quantitative design was utilized, involving 131 randomly selected students during the first semester of academic year 2024–2025. Data were gathered using a contextualized version of the Clinical Learning Environment, Supervision, and Nurse Teacher Evaluation Scale (CLES+T), covering five key dimensions: pedagogical atmosphere, leadership style of the charge nurse, premises of nursing in the ward, supervisory relationship, and roles of clinical

instructors. Results showed that students were generally satisfied across all dimensions, with the highest ratings in supervisory relationships and clinical instructor roles. A significant difference was found in the perception of leadership style based on sex, with female students reporting higher satisfaction. No significant differences were observed based on clinical area or length of exposure. The findings emphasize the importance of supportive supervision and inclusive leadership in clinical settings. These elements not only contribute to a more effective and compassionate clinical setting but also highlights the need for continuous improvement in clinical education and support the development of inclusive, high-quality learning environments for all student nurses. To address these needs, a tri-fold supplementary pamphlet was developed to provide strategies for improving the CLE for both students and clinical mentors. It aims to foster a more supportive and effective clinical setting by encouraging compassionate teaching, constructive feedback, and open communication.

*Keyword:* Nursing Education, Competence, Confidence, Self- assurance, Professional Roles, Gender-based variation, Supportive Supervision, Inclusive Leadership, Clinical Setting

## **SHNS-SR-o8**

### **Sexual Health Awareness of LGBTQIA+ Community in a Private Institution**

*Klydeen Jane C. Balcita, Keren Ashley U. Bulatao, Ainesra Jermaine M. Moya, Andhrea Amor G. Nguyen, & Mary Rose C. Jontilano, RN, MSN*

Sexual health is a fundamental component of overall well-being. This study aimed to investigate the level of sexual health awareness among the LGBTQIA+ community through comparative methods of the different variables such as age, gender orientation, marital status of parents, family orientation, and religion. A descriptive-comparative research design was utilized to determine the sexual health awareness of LGBTQIA+ individuals within a private institution, with emphasis on how education influences informed decision-making and effective sexual health navigation. This study investigated the sexual health awareness of LGBTQIA+ individuals within a private institution, with emphasis on how education influences informed decision-making and effective sexual health navigation. Data were collected from 75 participants using a structured questionnaire to assess knowledge, attitudes, and practices related to sexual health awareness. The analysis employed frequency counts, mean scores, Kruskal-Wallis H tests, and post hoc pairwise comparisons to identify significant differences among sociodemographic groups. Findings revealed that 56 (74.7%) of the participants demonstrated high levels of sexual health knowledge. In comparison, 55 (73.3%) revealed average levels of sexual health attitude, and 46 (61.3%) showed average levels of sexual health practices. Significant differences were observed in sexual health awareness when grouped by age and sexual orientation, specifically total awareness scores. In contrast, no significant variation was found when grouped by marital status, family structure, or religion. These results support the recommendation for strengthening inclusive, responsive, and evidence-based sexual health education programs within academic settings. Special attention must be given to addressing gaps in knowledge and shaping attitudes, particularly for LGBTQIA+ youth.

*Keywords:* Age, sexual orientation, sexual knowledge, sexual attitude practices, family structure, and religion

## SHNS-SR-09

### **Medication Adherence among Hypertensive Faculty Members at Saint Mary's University: Assessing Compliance Levels**

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Hypertension (HPN), a major global health concern often referred to as the "silent killer," continues to be a leading cause of morbidity and mortality worldwide. Despite being preventable and manageable, its prevalence remains high due to various modifiable and non-modifiable risk factors, including lifestyle, age, and stress. Overall, this study aimed to determine the level of compliance among hypertensive faculty members of Saint Mary's University, Bayombong, Nueva Vizcaya, in their medication maintenance. Additionally, certain demographic factors were determined as well as their potential contribution to the said level of compliance. A quantitative research design utilizing a validated questionnaire was employed for the study. Findings revealed that while hypertension was more prevalent among older, full-time faculty respondents, overall medication compliance was poor. Statistical analysis showed no significant difference in adherence levels when grouped by sex, age, employment status, or school affiliation, meaning that the compliance levels are the same regardless of these factors. Based on the findings, the study recommend institutional interventions such as wellness programs, consistent monitoring, counseling, and collaborative health initiatives to promote better compliance and health outcomes. Additionally, informative infographics tailored to faculty needs were developed to raise awareness and support ongoing health education.

*Keywords:* faculty, maintenance, compliance levels, hypertension, university

## SHNS-SR-10

### **Life Experiences of Parents Raising Children Diagnosed With Autism Spectrum Disorder**

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Parents raising children diagnosed with autism spectrum disorder (ASD) face unique challenges that impact their emotional, social, and financial well-being. This study aims to explore and understand the diverse experiences of these parents in Dupax del Sur, Nueva Vizcaya. Using a descriptive-qualitative approach, the research involved semi structured interviews with purposively selected parents, analyzed through thematic analysis. The findings revealed that parents experience significant emotional distress, social stigma, and financial strain. They reported feelings of confusion and anxiety upon diagnosis, followed by a gradual adaptation as they developed coping strategies. Support systems, including family, healthcare providers, and community networks, play a critical role in their adjustment. However, limited awareness of ASD in the community intensified parents' struggles, emphasizing the need for public education and targeted support. The study highlights the importance of strengthening community-based support services, enhancing public awareness of ASD, and ensuring access to affordable interventions for affected families. These insights contribute to a better understanding of parental experiences and inform the development of comprehensive support programs for families of children with ASD.

*Keywords:* Autism spectrum disorder, challenges, enhanced awareness, parents lived experiences support service

## SHNS-SR-11

### **Exploring the Lived Experiences of Postpartum Mothers: A Qualitative Inquiry into Their Traditional Postpartum Practices**

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The traditional postpartum practices continue to shape maternal health behaviors in many Filipino communities despite the growing accessibility of modern medical care. This study explored the lived experiences of postpartum mothers in Bambang, Nueva Vizcaya, Philippines, focusing on their adherence to culturally inherited postpartum traditions. The objective was to examine both the perceived benefits and challenges of these practices, and to propose an educational strategy through Information Education and Communication (IEC) materials that support culturally sensitive healthcare. The research employed a qualitative-descriptive design, utilizing semi-structured interviews and thematic analysis based on Clarke and Braun's framework. Findings revealed that practices such as *tanggap* (postpartum resting), herbal baths, dietary restrictions, and maternal guidance from elders were prevalent among respondents. While these traditions were often followed out of obligation or fear of consequences like "binat", participants also reported emotional and physical relief attributed to them. The integration of medical and traditional postpartum care was also evident, with healthcare providers showing respect for cultural beliefs. The study concludes that traditional practices offer both benefits and challenges and recommends the development of culturally tailored IEC materials. These findings have implications for nursing practice, particularly in promoting holistic, culturally competent postpartum care that balances traditional wisdom with evidence-based medicine.

*Keywords:* adaptation, cultural beliefs, healing rituals, maternal care, postnatal recovery

## SHNS-SR-12

### **Safety Culture and Safety Attitudes of Nurses Employed In Salubris Medical Center**

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Patient safety culture and attitudes among healthcare professionals play a crucial role in determining the overall quality and safety of care delivered in hospitals. Despite increasing efforts to enhance safety in Philippine healthcare, little is known about the relationship between institutional safety culture and individual safety attitudes among nurses in provincial medical centers. This study assessed the perceptions of 49 registered nurses at Salubris Medical Center in Nueva Vizcaya, regarding safety culture and safety attitudes, and examined the correlation between the two. Using validated survey tools—the Hospital Survey on Patient Safety Culture (AHRQ-HSOPS 2.0) and the Safety Attitudes Questionnaire (SAQ)—data were collected and analyzed using descriptive statistics and Pearson's correlation. The results revealed that while nurses generally held positive perceptions of safety culture and safety attitudes, specific dimensions such as staffing adequacy, stress recognition, and management support were areas for improvement. A statistically significant moderate positive correlation ( $r = 0.583$ ,  $p < 0.01$ ) was found between safety culture and safety attitudes, suggesting that improvements in one may influence the other. Hospital leadership should prioritize strategic interventions such as leadership engagement, structured training, and non-punitive reporting systems to enhance both institutional safety culture and individual safety attitudes among nursing staff.

*Keywords:* Hospital leadership, nurse perception, safety culture, safety attitudes, patient safety

### **SHNS-SR-13**

#### **Awareness of Significant Others Regarding Postpartum Depression in A Selected Community**

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Postpartum depression (PPD) is still a serious but sometimes ignored maternal mental health problem that quietly compromises the well-being of mothers, their families, and society. Though

global and national statistics show its frequency and influence, many local areas still lack awareness among family members, especially those who are the mother's primary support system. This study sought to evaluate and clarify the degree of awareness of postpartum mothers' significant others in Barangay Roxas, Solano, Nueva Vizcaya, about postpartum depression. The study aimed to investigate significant others' awareness of PPD's causes, risk factors, signs and symptoms, supportive management, and preventive strategies, given their essential influence during the vital postpartum period. Using a descriptive-comparative research

approach, the study polled 49 purposively chosen respondents who were the primary care providers of mothers within one year postpartum. A three-part researcher-made and validated questionnaire comprising demographic profiling, awareness level evaluation, and postpartum partner support scales was used to collect the data. Results showed that although some people showed a rudimentary awareness of PPD, especially in lower socioeconomic groups and among

those with less education, knowledge deficits were still apparent. Awareness levels also varied significantly when people were grouped according to particular profile characteristics, including

age and educational background. The results underlined the urgent need to improve health education initiatives aimed at not only mothers but also their close support networks. In response,

the researchers created an Information, Education, and Communication (IEC) material, a culturally relevant and accessible pamphlet that combines vital information on PPD and motivates important others to be proactive, informed, and sympathetic partners in the postpartum period. This research study underlines the need to empower communities to identify

and address issues with maternal mental health. By tackling social stigma, encouraging early intervention, and finally enhancing results for postpartum women and their families, it advances

the academic domain of nursing and community health development.

*Keyword:* Postpartum Depression, Awareness, Significant Other, Support System, Risk Factors, Preventive Strategies, Selected Community, IEC Material, Descriptive-Comparative Study, Community-Based Intervention

### **SHNS-SR-14**

#### **The Correlation between the Perception of Saint Mary's University Junior High School and Senior High School Students on the Quality of Life and Their Adherence to the Management of Acne**

Acne is a prevalent dermatological condition that significantly affects adolescents' psychosocial well-being and self-perception. Although several studies have addressed either quality of life or treatment adherence in acne patients, there remains a notable gap in the literature directly correlating these two variables—particularly among Filipino adolescents in a school-based setting.

This study addresses that gap by examining the relationship between perceived quality of life and adherence to acne management among Junior and Senior High School students of Saint Mary's University, Bayombong, Nueva Vizcaya. A sequential-explanatory mixed-method design was employed, involving 316 stratified respondents across Grades 9 to 12. Quantitative data were collected using two validated tools: the modified Morisky Medication Adherence Scale (MMAS-8) and the Cardiff Acne Disability Index (CADI). Results revealed that most students had low adherence to acne management, while the majority perceived their quality of life as minimally to mildly impaired by acne. A significant inverse correlation was found ( $r = -0.329, p < 0.01$ ), indicating that better adherence was associated with a more positive perception of quality of life.

In response to these findings, a self-esteem upliftment program was proposed to help improve both adherence and psychosocial outcomes. To guide future research, it is recommended to expand the sample across different regions, include clinical acne severity assessments, conduct longitudinal follow-ups, and explore additional psychosocial factors such as media influence, peer perception, and mental health. Addressing these will help further close the knowledge gap and support more holistic, adolescent-centered interventions for acne management.

*Keywords:* adolescent, compliance, skin care, self-upliftment, self esteem

## **SHNS-SR-15**

### **Unveiling the Quality of Life of Older Adults**

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Numerous studies emphasize that quality of life in older adults is a multidimensional concept influenced by factors such as physical health, social engagement, and access to supportive community programs, all of which are essential for promoting active and meaningful aging. This study explores the quality of life of older adults, particularly their physical and social well-being, in relation to their participation in community programs. Using a descriptive qualitative design, data was gathered through an in-depth interview with 16 older adults aged 65 and above in Barangay Vista Alegre, Bayombong, Nueva Vizcaya. The results reveal that free health check-ups, vitamins and medications, and community-led physical activities contribute to the physical well-being of older adults. However, challenges such as mobility issues and inadequate healthcare access hinder participation. Meanwhile, civic membership, particularly in senior citizen organizations, provides financial and emotional support. This study emphasizes the need for sustainable, accessible community programs tailored to older adults' needs. Recommendations are provided for policymakers, the nursing academe, and local government units to improve senior-focused initiatives.

*Keywords:* Aging, community program, participation barriers, physical health, social well-being

## SHNS-SR-16

### **Perception of Mothers towards *Hilot* for Children Ages Two to Five Years in Barangay Sta. Cruz, Bagabag, Nueva Vizcaya: Basis for Health Teaching On Massage Therapy**

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Traditional healing practices continue to play a significant role in Filipino communities, particularly in rural areas where access to modern healthcare may be limited. *Hilot*, a form of traditional massage therapy, is widely used as an alternative treatment for various childhood ailments. This study explored the perceptions of ten mothers in Barangay Sta. Cruz, Bagabag, Nueva Vizcaya, regarding the effectiveness of *hilot* for children aged two to five years. Using an exploratory mixed-method approach, both qualitative and quantitative data were collected through interviews and survey questionnaires. The study sought to determine the factors influencing mothers' decisions to utilize *hilot*, their level of satisfaction, and the perceived effectiveness of the practice in treating common pediatric conditions such as fever, colds, stomach pain, and musculoskeletal discomfort. Findings revealed that cultural beliefs and social influence play a major role in mothers' preference for *hilot*. The overall level of satisfaction with *hilot* as an alternative healthcare was very satisfied (mean = 4.35, SD = 1.17). The highest-rated aspect was the cost-effectiveness of *hilot* (mean = 4.9, SD = 0.83), followed by the perceived effectiveness of *hilot* for symptom relief (mean = 4.7, SD = 1.1). However, when *hilot* did not fully resolve the child's illness, satisfaction decreased (mean = 3.6, SD = 1.28), showing that some mothers still sought medical intervention for persistent symptoms. Based on the findings, a health teaching program on massage therapy was designed to bridge the gap between traditional and modern medicine. This initiative aims to equip mothers with knowledge on safe massage techniques, proper healthcare practices, and when to seek medical care. The study concludes that while *hilot* remains a valued cultural practice, integrating it with professional healthcare can enhance the well-being of children especially in rural communities. Future research is recommended to further explore the physiological effects of *hilot* and its potential integration into primary healthcare services.

*Keywords:* Manghihilot, pediatric massage, traditional healing practice

## SHNS-SR-17

### **Nutritional Status and Daily Food Intake of Preschoolers in Barangay Salingsingan, Ambaguio, Nueva Vizcaya: Basis of a Nutritional Guide**

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Despite national efforts to monitor child growth, there is limited research assessing how specific food group consumption patterns relate to developmental health outcomes among children in rural Philippine communities. This study addresses that gap by investigating the growth indicators and meal composition of preschool-aged children in Barangay Salingsingan, Ambaguio, Nueva Vizcaya. A descriptive-correlational-comparative design was used to analyze data from 41 children, including anthropometric measurements—height-for-age, weight-for-age, and weight-for-height—and a five-day caregiver-reported dietary log. The analysis revealed that although 92.7% of participants fell within normal range for weight

relative to height, 26.8% were classified as underweight and 69% were either stunted or severely stunted, indicating long-term nutritional deficits. Meal logs showed a heavy reliance on energy-rich staples, with 67.5% of meals classified under this group, while protein- and micronutrient-dense foods made up only 9.3% and 23.2%, respectively. All families reported monthly incomes below ₱12,000. Children with caregivers aged 25 to 34 tended to have more favorable health outcomes, suggesting an influence of parental maturity and potentially greater caregiving knowledge or stability. The study highlights the coexistence of calorie adequacy and micronutrient deficiency, pointing to the importance of targeted educational and food-access interventions in rural settings. Findings from this research can support localized planning for nutrition programs that better match the needs and realities of remote communities.

*Keywords:* linear growth deficit, dietary imbalance, food frequency analysis, caregiver influence, rural health disparities

### **SHNS-SR-18**

#### **Awareness and Compliance on the Practices of Ecological Solid Waste Management in Selected Barangays of Bayombong Nueva Vizcaya: Basis for Health Education-Information Activities**

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Solid waste management continues to be one of the most pressing environmental issues in the Philippines. Globally, the increasing volume and variety of waste in recent years have underscored the urgent need for sustainable waste solutions. In response, the United Nations introduced the Sustainable Development Goals (SDGs) in 2015 as a worldwide initiative aimed at ending poverty, safeguarding the environment, and fostering peace and prosperity by the year 2030. Several of these goals are directly connected to addressing the challenges of solid waste management (United Nations, 2015). This study evaluated the awareness and compliance of residents and garbage collectors in Barangays Don Mariano Marcos, District IV, and Salvacion in Bayombong, Nueva Vizcaya, regarding Republic Act 9003, the Ecological Solid Waste Management Act. Using a quantitative-descriptive design, the study surveyed 340 respondents: 161 from Salvacion, 108 from District IV, and 71 from Don Mariano Marcos. Data were collected through validated questionnaires and analyzed using descriptive statistics via IBM SPSS. Awareness was generally high, especially concerning health and environmental impacts. However, compliance was inconsistent, with weaker adherence to segregation and disposal practices. Garbage collectors showed better compliance than residents, despite limited resources and training. Barriers included irregular collection schedules, poor access to facilities, low seminar attendance, and weak policy enforcement. There is a gap between awareness and actual waste management practices. The study recommends barangay-based education, improved waste infrastructure, and stricter enforcement of local ordinances to enhance compliance and promote environmental sustainability.

*Keywords:* Adherence, ecological solid waste management, health promotion, R.A. 9003, knowledge, sustainability, waste collection, waste disposal, waste segregation

### **SHNS-SR-19**

#### **Factors Affecting the Roles and Empowerment of Barangay Health Workers**

*Maxine V. Aguilar, Casey Marielle M. De Vera, Angelica Jiana F. Marabut, Queen Lycka Peralta, & Melchora M. Bautista, RPh, MSPharm*

The barangay health workers (BHWs) play a vital role in the community since they provide basic healthcare services. It is therefore important to identify the factors that affect how they carry out their roles to think of ways in which they can be empowered, which will also improve the quality of care provided to the community. This study was geared towards determining the extent of factors affecting the roles of the BHWs and to identify the mandated and assumed roles that they perform. It also analyzed if there is a significant difference in the factors affecting the roles of BHWs when grouped according to profile variables. The researchers employed the descriptive-comparative research design. Data was gathered through a survey by floating an adapted questionnaire. There was a total of 146 BHWs who participated in the study. Data was analyzed and interpreted using frequency and percentage counts, weighted means, and ANOVA. The findings show that personal, political, environmental, emotional and physical factors moderately affect the BHWs. The most frequent mandated role performed is taking anthropometric assessment while providing prenatal care in the absence of healthcare professionals is the most frequently performed assumed role. There was a significant difference in the effects of personal factors when grouped according to educational attainment. The effects of political factors significantly differ in terms of educational attainment and employment status. An IEC material was designed to highlight the key roles of BHWs and the ways in which they can be empowered, with the goal of improving their capacity to serve the community effectively by providing clear, concise information about their mandated roles in healthcare delivery.

*Keywords:* Assumed roles, emotional factor, environmental factor, mandated roles, personal factor, political factor

## **SHNS-SR-20**

### **Factors and Effects of Sleep Deprivation among Architecture Students and Their Correlation with Selected Profile Variables: Basis for a Health Education Information Material**

*Busania, Emmie Micah Jonah C., Gonzales, Erika Jean G., Udan, Kelly Blossom Y., & Molly Aivon Guerrero, RN, MAN*

Architecture students often experience chronic sleep deprivation due to heavy academic workloads and irregular schedules. This study investigated the factors and effects of sleep deprivation among architecture students at Saint Mary's University and explored its correlation with profile variables like age, sex, year level, socioeconomic status, sleep hours, and Body Mass Index. It also aimed to develop a health education material based on the findings. A descriptive-correlational design was used with 174 stratified randomly selected students. Data were gathered using a validated, researcher-made questionnaire and analyzed using descriptive statistics, Pearson's  $r$ , and Spearman's  $\rho$ . One-third of students reported sleeping less than five hours nightly. Major contributing factors included academic workload, gadget use before bedtime, irregular sleep schedules, and stress. Sleep deprivation moderately affected students' physical health (irritability, muscle aches, headache) and social health (problems with communication or concentration in social settings and mood changes). Significant correlations were found between contributing factors, health effects, and several profile variables, especially sleep duration and socioeconomic status. Sleep deprivation significantly impacts architecture students' well-being. The study underscores the need for targeted interventions. A health education material on sleep quality was developed to help students manage sleep and improve academic performance.

*Keywords:* Academic workload, Body mass index, correlation, health education, stress

## SHNS-SR-21

### **Quality of Life of Older Adults of Barangay Bonfal Proper: Study on a Community-Based Health Integrated System**

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Quality of life refers to an individual's overall well-being, including health, comfort, and ability to engage in life activities. It is influenced by the services and programs provided by institutions, making it a crucial factor in healthcare decision-making. This study explored the perceptions of quality of life among older adults in Barangay Bonfal Proper, Bayombong, Nueva Vizcaya, within the framework of a Community-Based Health Integrated System. Using a descriptive qualitative research design, data were collected through focused interviews with 20 participants aged 60 to 80 years, selected via criterion sampling. Findings indicate that older adults seek a meaningful and well-supported quality of life, which is enhanced through community-based health systems implemented by local government units and disseminated to barangays. Participants emphasized that access to integrated healthcare services plays a vital role in maintaining their well-being. Through assessments, interviews, and evaluations, the study provides insights into how older adults perceive, experience, and engage with these health systems in their community. This research highlights the significance of a structured healthcare approach that aligns with the unique needs of the elderly population and supports their pursuit of a better quality of life.

*Keywords:* Quality of life, elderly care, community-based health system, healthcare accessibility, aging population

## SHNS-SR-22

### **The Knowledge Level of Residents in Barangay Vista Alegre on Dengue and Its Prevention: A Basis for Health Education**

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This study was conducted in Barangay Vista Alegre, Bayombong, Nueva Vizcaya. It assessed the knowledge level of the residents regarding dengue fever, especially when it comes to its prevention. It was designed to become a basis for future health education programs. With the use of a descriptive-comparative research design, data were gathered from 286 residents. Selection was done through a simple random sampling. The researcher-made questionnaire measured respondents' knowledge in four areas, namely: transmission, symptoms, prevention, and management of dengue. The results showed that the overall knowledge of the respondents was very high, most especially in the areas of transmission and prevention. On the other hand, knowledge related to dengue management was significantly lower, indicating that there is a gap in understanding what to do once infected. There were no significant differences in knowledge levels in terms of sex, age, employment status, educational attainment, or socioeconomic status, suggesting fair dissemination of information within the community. The findings highlight the importance of strengthening local health education efforts, mainly in correcting misconceptions (e.g., mosquito biting times) and enhancing community-based dengue management practices.

The study serves as an important reference for barangay officials, health workers, and future researchers in creating a more targeted intervention to combat dengue and reduce its incidence.

*Keywords:* Aedes aegypti, fogging, management of dengue, misting, and symptoms of dengue

### **SHNS-SR-23**

#### **Traditional Maternal Nursing Practices in Pregnancy, Labor, And Postpartum Among Ilocano Mothers of Curifang, Solano, Nueva Vizcaya**

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Traditional maternal practices remain important in modern child-rearing, reflecting their lasting cultural value and effectiveness. This qualitative study investigated the traditional maternal practices during pregnancy, labor, and postpartum among women in Barangay Curifang, Solano, Nueva Vizcaya. Data were gathered through in-depth interviews with Ilocano women, who are residents of the area, and who had experienced at least one childbirth. Thematic analysis revealed that traditional practices remain deeply rooted despite medical advancements. During pregnancy, prominent themes included protective rituals, dietary beliefs, health practices and physical activity, and the use of traditional medicine. For labor, pre-labor rituals and physical preparations were commonly practiced. In the postpartum period, body healing and protection practices, use of food and herbal remedies, infant hygiene rituals, and spiritual safeguards for newborns were identified. The continuing influence of elderly women and traditional birth attendants was evident in shaping maternal care. Traditional maternal practices remain integral to the maternal experience in Barangay Curifang. Recognizing and respecting these cultural traditions, while integrating them with evidence-based medical care, is essential for promoting inclusive, respectful, and effective maternal health services. The study recommends culturally sensitive healthcare approaches, including community immersion programs for students and collaborative support from local governments and NGOs. These initiatives can bridge traditional and modern practices to improve maternal outcomes.

*Keywords:* contemporary maternal care, cultural significance, culture, health beliefs, traditional practices

### **SHNS-SR-24**

#### **Awareness on the Prevention of Type 2 Diabetes Mellitus among Marian Students: Towards a Health Education Information Material**

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Type 2 Diabetes Mellitus (T2DM) is a chronic metabolic disorder that has become one of the leading causes of morbidity and mortality worldwide. In the Philippines, it remains a major public health concern, especially among the youth. This study aimed to assess the level of awareness on the prevention of T2DM among Marian students of Saint Mary's University. Using a quantitative, descriptive-comparative research design, data were collected from 360 students selected through stratified random sampling. The results revealed that students were

aware of T2DM prevention in terms of eating and drinking habits. A significant difference in the level of awareness was found when grouped according to sex, where female students had higher awareness than males. However, no significant differences were found based on age, year level, and school. Despite their awareness, students may not always practice preventive measures. Based on the results, the researchers developed a health education information material in the form of a brochure to enhance T2DM prevention awareness. The brochure aims to promote healthier lifestyle choices and encourage consistent preventive practices among students.

*Keywords:* t2dm, eating habits, drinking habits, lifestyle behavior

## **SHNS-SR-25**

### **Empowering Communities: Understanding Health Literacy and Polycystic Ovarian Syndrome (PCOS) Awareness in Barangay Magsaysay, Bayombong, Nueva Vizcaya**

*Kim Alystair P. Bunnol, James John Elijah Q. Eñeja, Lovelie Bianca W. Gumaru, & Mary Rose C. Jontilano, RN, MSN*

Polycystic Ovarian Syndrome (PCOS) is a common endocrine disorder affecting 6–13% of reproductive-aged women, with up to 70% undiagnosed. Defined by the WHO, it involves hormonal imbalances, irregular menstruation, and hyperandrogenism, leading to infertility and metabolic risks. Despite its impact, it remains underdiagnosed, underscoring the need for greater awareness. Defined by the WHO, it involves hormonal imbalances, irregular menstruation, and hyperandrogenism, leading to infertility and metabolic risks. Despite its impact, it remains underdiagnosed, underscoring the need for greater awareness. This study employed a quantitative descriptive-correlational design to assess the health literacy and PCOS awareness of women aged 18–44 in Barangay Magsaysay, Bayombong, Nueva Vizcaya. A structured questionnaire was used to gather data on demographic profiles, health literacy, and PCOS awareness. Statistical analysis examined relationships between age, educational attainment, health literacy, and awareness. The findings showed that most respondents were aged 25–44, with basic to intermediate educational backgrounds. While health literacy levels were moderate, nearly half of the respondents reported not receiving help in understanding medical information. Awareness of PCOS was generally high at 63.6%, but gaps in knowledge remained, particularly regarding metabolic symptoms, treatment options, and cultural beliefs. The internet was the most cited source of information. A moderate negative correlation was found between age and health literacy, while educational attainment showed a positive correlation with both health literacy and PCOS awareness. Findings indicate that although general awareness of PCOS is high, gaps remain that may hinder early detection and management. Education plays a key role in improving health literacy and awareness. Community-based initiatives and integrating PCOS education into local health campaigns are recommended to enhance reproductive health outcomes. The researchers recommend integrating PCOS awareness into local health campaigns to support early recognition and intervention.

*Keywords:* health campaigns, information sources, knowledge gaps, metabolic symptoms, reproductive health

## **SHNS-SR-26**

### **Exploring the Postpartum Experiences of First-Time Teenage Mothers in Barangay Salvacion**

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Teenage pregnancy continues to be a critical public health issue in the Philippines, which ranks second in Southeast Asia in adolescent birth rates, with approximately 200,000 cases annually. First-time teenage mothers often face unique postpartum challenges stemming from physiological, emotional, and social immaturity. This study aimed to explore the lived experiences of first-time teenage mothers in postpartum in Barangay Salvacion, Bayombong, Nueva Vizcaya. This research employed a qualitative phenomenological design to capture the nuanced experiences of adolescent mothers aged 12–19 years, all within their six-month postpartum period. Eleven participants were selected through purposive and snowball sampling. Semi-structured interviews were conducted, and data were analyzed thematically following Braun and Clarke's six-step method. Five major themes emerged: (1) Emotional Landscape of Teenage Motherhood, characterized by mood fluctuations, identity loss, and social disconnection; (2) Physical and Psychological Impact, including postpartum fatigue, sleep deprivation, and body image issues; (3) Adjustments to New Roles and Responsibilities, highlighting sudden lifestyle changes and inexperience in childcare; (4) Social and Financial Challenges, featuring economic struggles and societal stigma; and (5) Coping Strategies and Sources of Strength, which included family support, spiritual grounding, and acts of self-care. The findings highlight the multifaceted challenges faced by teenage mothers during the postpartum period, which are shaped by personal, cultural, and socioeconomic factors. Despite these challenges, resilience is evident through adaptive coping strategies and supportive family networks. The study advocates for adolescent-sensitive postpartum care, enhanced reproductive health education, and community-based interventions to improve outcomes for young mothers and their infants.

*Keywords:* Postpartum experiences, first-time teenage mothers, phenomenological study, emotional challenges, physical and psychological impact

## **SHNS-SR-27**

### **Exploring the Experiences of Young Adult Filipino Women with PCOS in Nueva Vizcaya**

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Polycystic Ovarian Syndrome (PCOS) is becoming increasingly recognized due to advancements in medical diagnostics and women's growing awareness of their reproductive health. However, there is limited research in the Philippines, particularly in Nueva Vizcaya that focuses on the experiences of young adult women living with this condition. This study aimed to explore the physical, psychological, social experiences, and coping mechanisms of these women. It also offers valuable recommendations for the affected individuals, their significant others, and healthcare providers.

The study focused on clinically diagnosed young adult women with PCOS in Nueva Vizcaya, aged 18–26 years—a critical age range representing the peak of reproductive potential and a major transitional phase in life. Using a descriptive-qualitative approach and purposive sampling, 18 participants from Bayombong, Bambang, and Solano were selected. They responded to a 13-question interview adapted from the PCOS Quality of Life 47 and 57, conducted through face-to-face interviews.

Findings showed that participants had varied experiences across physical, psychological, and social dimensions. The psychological impact of PCOS was profound; many women reported feelings of frustration, confusion, and a perceived loss of control, often triggered by physical symptoms and societal pressures. Physical manifestations such as weight gain, acne, and hair changes contributed to emotional distress and social anxiety, which were intensified by cultural expectations. Despite these challenges, participants shared diverse coping strategies.

Notably, most highlighted the importance of a strong support system in managing the condition particularly in areas such as emotional reassurance, financial assistance, and motivational reinforcement.

In general, the experiences of young adult Filipino women with PCOS in Nueva Vizcaya highlight the importance of a holistic, patient-centered approach. Enhancing awareness and understanding of PCOS in the region can lead to improved management and a better quality of life, empowering women to face the condition with resilience and confidence.

*Keywords:* acne, anxiety, body image, coping, quality of life, societal pressure

## **SHNS-SR-28**

### **Level of Awareness of Women about Polycystic Ovarian Syndrome (PCOS)**

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Polycystic Ovarian Syndrome (PCOS) is a prevalent endocrine disorder among women of reproductive age, yet it remains widely misunderstood and underdiagnosed—particularly in the Philippines. This quantitative-descriptive and comparative study assessed the level of awareness about PCOS among 275 women aged 20–49 years in Barangay Salvacion, Bayombong, Nueva Vizcaya and analyzed through ANOVA since this research compared the means of the groups when grouped according to age, marital status, educational attainment, and family history of PCOS. Data were collected using a validated survey adapted from a related study. A fourpoint Likert scale was used to assess the level of awareness among women regarding Polycystic Ovary Syndrome (PCOS). The scale measured awareness across several areas: general concept, causes, signs and symptoms, diagnosis, complications, prevention, and management of PCOS. Findings revealed that most participants were “not fully aware” of PCOS, with the highest awareness observed in recognizing infertility as a complication and irregular menstruation as a symptom. Younger, college graduates, and single women showed relatively higher awareness levels, though no significant statistical differences were found across all demographic variables. Nearly half of the women acquired knowledge from two or more sources, indicating a tendency to consult multiple channels rather than relying on a single one. In response to these findings, the researchers developed an appropriate infographic as an Information, Education, and Communication (IEC) material to enhance awareness and understanding among women. This study underscores the importance of enhancing PCOS awareness to support early diagnosis, proper management, and improved quality of life among Filipino women.

*Keywords:* Awareness level, community-based study, health education, polycystic ovarian syndrome, women of reproductive age

## **SHNS-SR-29**

### **Level of Awareness of Herbal Medicine among Residents in Bayombong, Nueva Vizcaya**

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Herbal medicines are widely used in the Philippines as an accessible and culturally embedded alternative to conventional medicine. Hence, the Department of Health (DOH) endorses 10 medicinal plants that has been scientifically validated. However, there is limited literature specifically examining awareness of the 10 DOH-approved herbal medicines among Filipino

rural communities and gaps remain in community level knowledge and appropriate usage, particularly in rural areas. This study investigated the level of awareness of the 10 Department of Health (DOH)-approved herbal medicines among residents aged 40–59 in selected barangays of Bayombong, Nueva Vizcaya. Specifically, it evaluated awareness in terms of usage, knowledge, and preparation. A descriptive-correlational design was used, involving 285 respondents

selected through stratified random sampling. Data were gathered via a validated questionnaire and analyzed using descriptive and inferential statistics. Results showed a high prevalence of herbal medicine usage (99.6%), particularly Lagundi, Ampalaya, Bayabas, and Bawang. Awareness was generally high in terms of preparation and knowledge; however, certain herbs such as Tsaang Gubat, Akapulko, and Niyogniyogan were less recognized. Moreover, no significant correlation was found between awareness and demographic variables including sex, educational attainment, and socioeconomic status, suggesting that knowledge of herbal medicine is influenced more by cultural transmission than formal education. As an output, an Information,

Education, and Communication (IEC) brochure was developed to guide proper usage and promote safe, evidence-based practices. The findings highlight the critical need for accessible, community-wide health education to support informed and safe herbal medicine use in rural communities.

*Keywords:* Brochure, community health, ethnomedicine, health promotion, traditional practice

### **SHNS-SR-30**

#### **Adoption and Meaningful Use of Social Media by Healthcare Providers in Rural Health Unit of Solano, Nueva Vizcaya to Share Medical Information on Vaccines**

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Healthcare providers play a vital role in advancing public health by sharing accurate information, fostering trust, and promoting healthy behaviors within communities. In today's digital age, social media has emerged as a powerful platform for health communication, enabling professionals to disseminate information quickly, counter misinformation, and engage with wider and more diverse audiences beyond traditional methods. While many studies have examined the effectiveness of electronic health initiatives globally, there is a notable lack of research in the Philippine context, particularly in rural areas like the Rural Health Unit (RHU) of Solano, Nueva Vizcaya. This study explores how healthcare providers at the Solano RHU adopt and utilize social media for vaccine-related communication, focusing on their experiences, strategies, perceptions, and the barriers they face. Using a descriptive-qualitative design, data were gathered through interviews and focus group discussions with 25 purposively selected healthcare workers. The findings indicate that social media is considered an essential tool for community engagement and health education, especially in reaching various age groups and demographics. Effective strategies identified include consistent posting of relatable content, use of visuals, collaboration with local influencers, and active interaction with community members. However, challenges such as inadequate digital literacy, limited access to technology, unreliable internet connectivity, and the spread of misinformation were also observed. The study emphasizes the need for continuous digital skills training, stronger collaboration with barangay health workers, and the establishment of clear guidelines to ensure responsible and impactful social media use. Ultimately, the research emphasizes the potential of social media to enhance vaccine promotion and health communication in rural areas when applied thoughtfully and strategically.

*Keywords:* healthcare provider, social media, vaccine hesitancy, thematic analysis

### **SHNS-SR-31**

#### **Exploring First-Time Mothers' Experiences with Maternal Risk Factors during Pregnancy**

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Maternal risk factors during pregnancy encompass a range of physical, emotional, and psychosocial challenges that can significantly affect both maternal and fetal health. First-time mothers, in particular, face unique vulnerabilities that necessitate tailored support to safeguard

their well-being and that of their babies. This qualitative research explored first-time mothers' experiences with maternal risk factors in pregnancy in Barangay San Luis, Solano, Nueva Vizcaya. Attentive to the unique vulnerabilities and heightened anxieties of the primigravida woman, the study aimed to address a literature gap that traditionally overlooks the psychosocial,

physical, and emotional hurdles unique to first-time pregnancy. Using purposive sampling, in-depth interviews were conducted with 12- to 35-year-old women in their second or third trimester with identified maternal risk factors. Thematic analysis revealed that the participants practiced numerous self-care interventions, such as lifestyle and diet modifications, preventive health practices, seeking emotional support, and adhering to expert medical recommendations. These interventions were used to deal with the significant physical and emotional transformations of pregnancy and to optimize positive maternal and fetal outcomes. The results reinforce the need for individualized guidance and education of first-time mothers with risk factors, with the implication that superior healthcare interventions and robust support structures are essential to enhancing their quality of life and overall pregnancy experience.

*Keywords:* Risk factors, maternal health, pregnancy self-care, emotional well-being, first time mothers

### **SHNS-SR-32**

#### **Exploring Telemedicine Perceptions among Community Residents**

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Telemedicine is the remote delivery of healthcare services using digital communication technologies, such as video calls and messaging platforms. It enables patients to consult with healthcare providers without the need to travel to a clinic or hospital, improving access to medical care, especially in rural areas. This study explored the perceptions of telemedicine among residents of Barangay Paitan, Bayombong, Nueva Vizcaya. Data were collected through semi-structured interviews with 11 participants aged 19 to 49, selected through snowball sampling using a qualitative descriptive design. Findings revealed a general willingness among residents to use telemedicine, especially if they have access to necessary technology and stable internet access. Participants identified benefits, including reduced travel time, lower healthcare-related costs, and better access to medical services. However, concerns included poor or unstable internet connections, lack of appropriate devices, limited capacity for physical assessments and laboratory assessment during virtual consultations, financial constraints, and low digital literacy. To overcome these barriers, participants suggested strategies such as borrowing gadgets, using barangay-provided Wi-Fi and generators,

improving communication with healthcare providers during online consultations, and taking into account patients' financial situations when designing telemedicine services. In conclusion, telemedicine was viewed positively and seen as a promising approach to improving healthcare delivery in rural communities, but its success depends on addressing both technological and socioeconomic barriers.

*Keywords:* Digital literacy, healthcare access, rural healthcare, technology access, internet connectivity

### **SHNS-SR-33**

#### **Practices during Pregnancy, Labor, and Immediate Postpartum of Women Residents of Talbek, Dupax Del Sur, Nueva Vizcaya**

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Maternal health remains a pressing issue, particularly in developing regions like Asia, where maternal mortality rates (MMR) are disproportionately high. In the Philippines, geographically isolated areas such as Barangay Talbek, Dupax del Sur, Nueva Vizcaya, face limited access to formal maternal healthcare, exacerbating existing disparities. Despite improvements in healthcare services and supply-side interventions like training healthcare professionals, demand-side factors—especially traditional practices—continue to shape maternal behaviors. This qualitative study investigated maternal health practices during pregnancy, labor, and the immediate postpartum period among women in Barangay Talbek. Guided by the Health Belief Model (HBM), it explored how perceptions of susceptibility, severity, and barriers influence healthcare decisions. Data were collected through in-depth interviews with women from diverse traditional backgrounds, ensuring a comprehensive understanding of prevailing practices. Thematic analysis revealed that while modern medical interventions are increasingly accepted, traditional beliefs remain deeply rooted. Some practices offer psychological comfort, but others may compromise safety when they replace essential medical care. To improve maternal outcomes, the study recommends integrating traditional practices with evidence-based medicine. Local government units must improve healthcare accessibility, while barangay health offices should provide education and counseling on safe maternal practices. Health practitioners should undergo competency training and collaborate with traditional birth attendants to bridge gaps between practices and modern medicine. Empowering women through education and awareness campaigns is vital for informed decision-making. Strengthening partnerships among government agencies, healthcare providers, and communities will foster a more inclusive and effective approach to maternal care, promoting the well-being of future generations.

*Keywords:* Healthcare accessibility, maternal health, maternal mortality rate (MMR), traditional practices

### **SHNS-SR-34**

#### **Awareness and Extent of Self-Care Practice among Pregnant Women towards Prevention of Pregnancy-Induced Hypertension**

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Pregnancy-induced hypertension (PIH) is among the leading causes of maternal and fetal morbidity and mortality worldwide. Despite the availability of antenatal care services,

awareness and practice of self-care among pregnant women to prevent PIH still remain inadequate. Using a descriptive-correlational quantitative design, data were collected through administration of a survey-questionnaire to 127 pregnant women selected through convenience sampling. Descriptive statistics, Likert scales, and Pearson correlation were used for data analysis. This study assessed the awareness and extent of self-care practice related to the prevention of PIH among pregnant women in Solano, Nueva Vizcaya from February 2025 to April 2025. It also determined if a significant relationship exists between these variables. Findings show that pregnant women demonstrated high awareness of PIH (Mean = 2.58), with the highest awareness in prevention and management, but low understanding of signs, risk factors, and complications. Self-care practice was rated very high overall (Mean = 3.34), with strong adherence to health provider visits and avoidance of harmful substances. However, awareness and self-care practice showed no significant correlation ( $r = 0.055$ ,  $p = 0.548$ ), suggesting that behavior was not directly influenced by awareness. The findings indicate that while pregnant women practiced effective self-care, their actions may stem more from routine healthcare guidance than from an understanding of PIH. The gap between awareness of symptoms and complications and self-care highlights a need for targeted antenatal education. The study underscores the importance of strengthening health communication and support systems to improve maternal outcomes and reduce the risks associated with PIH.

*Keywords:* Pregnancy-induced Hypertension (PIH), Knowledge, Self-Care Practice

### SHNS-SR-35

#### **Anti-Ulcerant Activity of Beya-Uh (*Miscanthus sinensis*) Pith Extract in Ethanol- Induced Albino Rats and Cytotoxicity Assay**

*Cummiting, Christian O., Acapen, Julia Elizabeth M., Antonio, Lovely Janelle V., Banghallan, Shada O., Enkiwe, Shekina T., & Veronica Pauline R. Belen, RPh*

Peptic ulcer is a common health issue that involves stomach lining destruction due to excessive production of gastric acid, increasing vulnerability to acidity and release of mucosal cell bicarbonate in the stomach. *Miscanthus sinensis*, commonly known as Beyauh, is traditionally used in Hungduan, Ifugao as an aid in ulcers. This study aimed to determine the anti-ulcerant activity of the Beya-uh pith extract through an in vivo study of ethanol-induced Albino rats and its cytotoxic activities. The presence of secondary metabolites was tested using phytochemical screening which showed essential oils, triterpenes, steroids, phenols, sugars, coumarin, tannins, alkaloids, and flavonoids. Five groups were utilized in the ulcer model: negative control, positive control (omeprazole), and treatment groups (100 mg/kg, 200 mg/kg, 400 mg/kg). The rats were pre-treated for seven days with Beya-uh pith extract to assess its gastroprotective and antisecretory effects. Macroscopic evaluation showed no significant difference ( $F$ - value= 1.246;  $p$ - value= .353) in gastroprotection. Similarly, no significant differences were observed in gastric volume ( $F = .331$ ;  $p = .851$ ) or pH levels ( $F = 1.060$ ;  $p = .425$ ) among the groups. Furthermore, the cytotoxicity assay showed that the Beya-uh pith extract has a low toxicity profile with an  $LC_{50}$  of 531.98 ppm. The study concluded that the pith extract contains gastroprotective and antisecretory properties with minimal toxicity. The findings proved the potential of Beya-uh pith extract as an anti-ulcer agent. Further research is recommended to develop appropriate dosage forms, determine therapeutic and toxic doses, and explore its efficacy using other methods.

*Keywords:* Antisecretion, gastroprotection,  $LC_{50}$ , omeprazole, ulcer model

### SHNS-SR-36

## **Formulation and Evaluation of *Ruellia tuberosa* Topical Hydrogel against Selected Skin Bacterial Agents**

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This study aimed to formulate and evaluate a topical hydrogel incorporating *Ruellia tuberosa* extract for its antibacterial activity and wound-healing potential. The antibacterial efficacy of the plant extract was tested against *Staphylococcus aureus* and *Proteus vulgaris* using an in vitro disc diffusion assay. The most effective concentration, 750 mg/mL, demonstrated significant activity against *Staphylococcus aureus* (mean zone of inhibition: 18.47 mm) and moderate activity against *Proteus vulgaris* (mean zone of inhibition: 11.37 mm), compared to mupirocin as a positive control. The optimized extract concentration was incorporated into a hydrogel base, which was then evaluated for its therapeutic potential, physical properties, and stability. The wound-healing assay, conducted using Sprague-Dawley rats, revealed that the *Ruellia tuberosa* hydrogel exhibited a comparable rate of wound reduction to mupirocin ointment, with the most significant decrease observed from Day 2 to Day 3. Stability testing showed that the hydrogel maintained its color, odor, and homogeneity over a week. These findings suggest that *Ruellia tuberosa* hydrogel holds promise as a natural alternative for treating bacterial skin infections and promoting wound healing. Further studies are recommended to enhance its bioavailability, expand its antimicrobial spectrum, and assess its long-term therapeutic effects.

**Keywords:** Antibacterial, phytochemical, skin infections, therapeutic effects, wound healing assay

### **SHNS-SR-37**

#### **Aphrodisiac Activity of Celery (*Apium graveolens* Linn.) Plant Extract and Its Dosage Formulation**

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Many individuals seek natural alternatives to pharmaceuticals for enhancing sexual performance due to concerns over side effects and interactions with other medications. Celery, as an aphrodisiac, has been sought for its potential to enhance sexual desire and pleasure. Employing a comparative experimental design, this research aimed to determine the potential of celery extracts as an aphrodisiac capsule. Phytochemical screening was performed to determine the secondary metabolites. The administration of various doses of celery plant extract was conducted, and the best concentration was used for the formulation of an aphrodisiac capsule. Results indicated that a 100 mg/kg dose of celery extract reduced mount latency. In comparison, a 200 mg/kg dose increased mount frequency. Notably, intromission frequency and latency were zero, indicating no observed intromission activity. Based on these findings, a 200 mg/kg dose of celery extract was selected to formulate aphrodisiac capsules, disintegration, and a consistent increase in drug absorbance with higher concentrations. The study concludes that celery extract at a 200 mg/kg dose demonstrates

aphrodisiac potential. These capsules that underwent disintegration and dissolution tests, both conformed within the United States Pharmacopoeia parameters. This study is only a preliminary study of its aphrodisiac activity; a more thorough clinical exploration of its aphrodisiac properties is necessary before humans can consume it.

*Keywords:* Drug absorption, intromission, mount latency, mount frequency, sexual desire

## **SHNS-SR-38**

### **Antidepressant and Anxiolytic Activity of *Cynodon dactylon* Extract: Formulation of Doob Grass Crude Extract (DGCE) Syrup**

*Melani C. Agustin, Mellainne Leazyl S. Balino, Khaila Mae S. Barcelá, Alyssa G. Mendez, Vince Von A. Serrano, & Melchora M. Bautista, RPh, MSPharm*

The study determined the antidepressant and anxiolytic properties of *Cynodon dactylon* commonly known as doob grass/ Bermuda grass through the formulation of doob grass crude extract (DGCE) syrup. The research employed an experimental and descriptive design using adult Swiss albino mice to assess the efficacy of DGCE at varying doses at varying dosages: 100 mg/kg, 200 mg/kg, and 400 mg/kg compared to established positive controls, Sertraline for antidepressant activity and Diazepam for anxiolytic activity. The percent yield obtained from DGCE was 4.98% falling within the established range of 4.55% to 5.42%. Phytochemical screening identified the presence of flavonoids, terpenoids, and saponins in the DGCE, which validates its antidepressant and anxiolytic effects. Findings from the Tail Suspension Test (TST) indicated a reduction in immobility time among mice, with durations of 83.9, 85.9, and 83.7 seconds at dosages of 100 mg/kg, 200 mg/kg, and 400 mg/kg, respectively, although less pronounced than Sertraline. Meanwhile, the Elevated Plus Maze (EPM) test revealed an increase in the duration of open-arm activity, observing durations of 162.25, 103.825, and 207.5 seconds at dosages of 100 mg/kg, 200 mg/kg, and 400 mg/kg, respectively, implying anxiolytic effects akin to Diazepam. Furthermore, the DGCE syrup formulation was evaluated for organoleptic properties, described as possessing a sweet and minty flavor, with a dark green color and a fresh, herbaceous scent. The texture was noted to be less viscous and found to remain stable over time. This study concludes that *Cynodon dactylon* is viable as a natural alternative for treating depression and anxiety. However, further research is recommended to optimize dosage, validate efficacy, and ensure safety for human applications.

*Keywords:* Diazepam, elevated plus maze, immobility time, sertraline, tail suspension test

## **SHNS-SR-39**

### **Water Lettuce (*Pistia stratiotes*): A Potential Liquid Media for Fastidious Bacteria**

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This study investigated the efficiency of Water Lettuce (*Pistia stratiotes*) as an alternative liquid culture media for fastidious bacteria, namely *Staphylococcus aureus* and *Enterococcus faecalis*. This study employed descriptive experimental design to examine the efficiency of Water Lettuce as a liquid media, the researchers collected Water Lettuce leaves that underwent crude extraction and prepared four concentrations of the Water Lettuce extract (25%, 50%, 75%, 100%). Then, the bacterial strains (*S. aureus* and *E. faecalis*) were inoculated in each concentration, and the bacterial growth was observed to determine which concentration supported the best bacterial growth. The bacterial growth in each concentration was compared to the standard Tryptic Soy Broth (TSB), which was inoculated onto Blood agar

plates (BAP) for the culture and morphologic characterization of the bacterial growth. In the comparison of TSB and different Water Lettuce concentrations using a spectrophotometer, the ANOVA test indicated no significant differences ( $F=1.192$ ;  $p=0.372$ ). This indicated that all the concentrations prepared were effective in growing fastidious bacteria. The morphological characteristics of *E. faecalis* and *S. aureus* on BAP showed no significant differences in the colony profile. The concentrations were tested on a spectrophotometer to determine the most efficient concentration, which showed in the spectrophotometric analysis of *S. aureus* that 50% Water Lettuce extract obtained 0.442. In contrast, TSB (control) obtained 0.367. In *E. faecalis*, TSB had a mean of 0.351, while 50% Water Lettuce had 0.450. The results reflected that 50% was the most efficient concentration for the growth of *S. aureus* and *E. faecalis*. These findings suggested that Water Lettuce extract had potential as an alternative liquid culture media for fastidious bacteria.

**Keywords:** Crude Extract, Tryptic Soy Broth, Spectrophotometer, *Staphylococcus aureus*, *Enterococcus faecalis*

## SHNS-SR-40

### **Potato Peel Extract in Uropathogenic *Escherichia coli* Strains: Basis for the Development of Antibacterial Susceptibility Disc**

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The increasing resistance of Uropathogenic *Escherichia coli* (UPEC) to conventional antibiotics has driven the need for alternative antibacterial agents. This research study is conducted to evaluate the potential antibacterial properties of potato peel extract against UPEC strains to provide a basis for the development of antibacterial susceptibility discs. The researchers utilized the disc diffusion method in creating the antibacterial susceptibility disc with varying concentrations, such as 10ul/mL, 9 ul/mL, 8 ul/mL, 7ul/ mL, 6ul/mL, and 1ul/mL, that is tested against the UPEC strains. The concentrations that produced a greater than 10 mm are considered biologically active, and the largest ZOI was identified as the most effective. The concentration 6 ul/mL had the largest ZOI, which measures 20.95 mm, and is therefore considered the most effective. Concentrations such as 10ul/mL and 1 ul/mL also showed significant antibacterial properties with ZOIs of 14.6 mm and 14.0 mm, respectively. The result of the study is a great foundation for the development of new antibiotics and susceptibility discs, which contribute to the fight against antibiotic-resistant infections.

**Keywords:** Antibacterial susceptibility disc, potato peel, potato peel extract, uropathogenic *Escherichia coli*, zone of inhibition.

## SHNS-SR-41

### ***In Vitro* Thrombolytic Activity of Ethanolic Extract from *Paspalum conjugatum* (Carabao Grass) And *Eleusine indica* (Paragis)**

*Andrea Nicole A. Aquino, Riezza Belle B. Dupale, Diane Jade C. Pasuquin, Jasmine Mae G. Rico, & Cathelyn C. Mariano, LPT, MA*

Thromboembolic disorders, including ischemic heart disease and stroke, pose significant health risks, leading to urgent needs for effective treatments. As current thrombolytic agents, while effective, often have limitations such as high costs and side effects. This research aimed to assess the potential *in vitro* thrombolytic activity of ethanolic extracts from carabao grass (*Paspalum conjugatum*) and paragis grass (*Eleusine indica*) as a natural, cost-effective

alternative for managing thromboembolic disorders. In vitro tests were used to assess the clot lysis effect of the ethanol extract from the carabao and paragis grass. Phytochemical screening revealed the presence of flavonoids and tannins in both grass extracts, indicating their potential for clot lysis. The results from thrombolytic assays showed a dose-dependent increase in clot lysis, *P. conjugatum* extract lysed the clot by 18.09 % in 2.5mg/mL, 27.59% in 5 mg/mL, 49.39% in 10 mg/mL and 65.60% in 20 mg/mL showing a steady increase with the concentration, while in *E. indica* extract it lysed 25.38 % in 2.5mg/mL, 41.53% in 5 mg/mL, 59% in 10 mg/mL and 82.67% in 20 mg/mL indicating that with the highest concentrations of both extracts achieving significant clot reduction making it the optimal concentration. . In comparison with the negative control, it showed a mere clot reduction of 0.32%. The findings suggest that carabao and paragis grass extracts possess a thrombolytic activity, warranting further investigation into their pharmacological properties and potential as natural thrombolytic agents.

*Keywords:* clot, lysis, flavonoids, tannins, thromboembolic disorders

## SHNS-SR-42

### ***Centella asiatica* (Takip-Kuhol) As a Potential Agent for Reducing Calcium Oxalate Formation in Urine**

*Tampoya, Mark Gil G., Castillo, Vanezza S., Marcelo, Shamica Joy A., Mariano, Jannah Angelica C., & Cathelyn C. Mariano, LPT, MA*

Kidney stones, particularly those formed from Calcium Oxalate (CaOx), present a growing health concern in the Philippines and globally. The continuous rise in the urolithiasis cases and the limitations of the existing therapeutic interventions underscore the need for alternative, natural remedies. This study determined the potential of *Centella asiatica*, locally known as *takip-kuhol*, as an agent for reducing calcium oxalate crystal formations in human urine. A descriptive experimental design was utilized, involving the collection of *takip-kuhol* leaves, preparation of varying extract concentrations, and administration of CaOx present in human urine samples. Test tube phytochemical analysis confirmed the presence of flavonoids and triterpenoids. These compounds are responsible for the anti-urolithiatic property of *C. asiatica*. Microscopic examination shows that there is a significant reduction of CaOx crystal count in all the *takip-kuhol* ethanolic extract (TKEE) concentrations, such as 50%, 75%, and 100%, respectively. The 100% TKEE concentration demonstrated the highest reduction, which is comparable to the positive control. Morphological assessments also showed dissolution and fragmentation, and eventual disappearance of Calcium Oxalate Monohydrate (COM) and Calcium Oxalate Dihydrate (COD) crystals after administration of TKEE extract. The TKEE shows a significant reduction of CaOx crystal formation and changes crystal shape, indicating its potential as a natural reducing agent of CaOx crystals, which could be relevant for conditions like kidney stones. Further research is essential to confirm these benefits in larger and diverse populations and under different dietary and health conditions. This ensures safe and effective use of *takip-kuhol* as a natural reducing agent for calcium oxalate crystals.

*Keywords:* Anti-urolithiasis, calcium oxalate dihydrate, calcium oxalate monohydrate, cystone, morphological characterization

## SHNS-SR-43

### **Liver Status of Sedentary Workers in a Private Catholic Institution**

*Jasthene Beanca E. Briones, Crystal Leigh P. Laforteza, Diana Jane B. Padaca, Phamela Loize T. Rudio, & Alicia Z. Jubay, MA*

The liver is a multifunctional organ with crucial roles in metabolism, detoxification, and regulation of numerous physiological processes, but its functioning can be affected by factors ranging from viral infection, excessive alcohol consumption, obesity, unhealthy lifestyles, and the nature of work. This descriptive-comparative study aimed to determine the liver status of sedentary workers in a private Catholic institution. Forty (40) participants were identified in Saint Mary's University, Bayombong, Nueva Vizcaya, through purposive sampling with the exclusion of individuals with diagnosed liver disease. Specific liver chemistry tests, including aspartate aminotransferase (AST), alanine aminotransferase (ALT), and albumin, were conducted on said participants. Test for Hepatitis B surface antigen (HBsAg) was also performed on all participants. AST, ALT, and Albumin tests showed normal results and all participants showed nonreactive results in the HBsAg test. Overall, the liver status of the respondents is normal with reference to the liver enzyme tests conducted. While there were differences in the mean levels of liver enzyme tests between groups, there were no significant differences established. Moreover, while there were no significant differences established between the given variables, this should not rule out the possibilities of the predisposition to various liver diseases as the liver enzyme test levels in certain groups tend to be higher compared to the other groups. Further study can be conducted to compare the liver status of sedentary and non-sedentary workers in relation to other variables that may contribute to the development of liver disorders.

*Keywords:* Liver disorders, liver tests, liver profile, lifestyle diseases, non-alcoholic liver disease

#### **SHNS-SR-44**

##### **Anti-Thrombocytopenic Activity of Golden Shower (*Cassia fistula*) Seed**

*Diane Kaye M. Gerardo, Harleen Faye G. Mariano, Virgie Lauren M. Padilla, Kim Charlotte B. Toledo, & Cathelyn C. Mariano, LPT, MA*

*Cassia fistula*, also known as the golden shower, is renowned for its ornamental appeal and medicinal benefits, which may include antioxidant, anti-inflammatory, antibacterial, anticancer, antidiabetic, and antimicrobial activities. This quantitative experimental research aimed to determine the anti-thrombocytopenic activity of *C. fistula* seeds. The Brine Shrimp Lethality Assay (BSLA) is a commonly used cytotoxicity test that determines the toxicity of seed extract on brine shrimp (*Artemia salina*). Blood was collected from a guinea pig to determine the platelet count using a hemocytometer and to perform a peripheral blood smear. In the BSLA, the seed extract was not toxic. The study revealed that all concentrations of *C. fistula* seed extract increased the platelet count of guinea pigs 4 hours after administration, with the 0.1% concentration identified as the optimum concentration. However, different concentrations can be used to increase platelet count. This study underscores the effectiveness of *C. fistula* seed extract as a safe and potential treatment for conditions associated with low platelet count. Its non-toxic nature and efficacy offer promising implications for addressing thrombocytopenia-related health challenges, potentially offering new avenues for therapeutic interventions and improving patient outcome.

*Keywords:* Cytotoxicity, heparin-induced thrombocytopenia, Neubauer chamber, platelets, peripheral blood smears

#### **SHNS-SR-45**

## **Hepatoprotective Activity of Locally Sourced Star Gooseberry (*Phyllanthus acidus*) in Nueva Vizcaya, Philippines**

*Lydimar G. Berras, Roselyn Daryl O. Ponhalban, Nina Jasmine C. Teneza, Paula Marie S. Cacatian, Jenica C. Agustin, & Jason Arnold L. Maslang, LPT, MBS, MAT*

The advancement of modern pharmacology has led to the exploration of various botanical resources. *Phyllanthus acidus*, also known as Star gooseberry, Otaheite gooseberry, or karamay in the Northern Philippines, has shown potential for the development of cost-effective and readily available herbal remedies for liver ailments. The study aimed to determine the effect of *P. acidus* crude extract on liver enzyme levels and histopathological changes in paracetamol-induced liver damage. This research intended to probe the hepatoprotective activity of locally sourced *Phyllanthus acidus* (Star Gooseberry) in Nueva Vizcaya, Philippines, using albino rats. It employed histopathologic and clinical examinations to examine the hepatoprotective activity of the crude extract of *P. acidus*. The results showed that while *P. acidus* extract at a dosage of 100 mg/kg significantly mitigated liver injury; higher doses (200 mg/kg and 400 mg/kg) resulted in more pronounced alterations in liver function markers, suggesting a dose-dependent effect and potential hepatotoxicity. Histopathological examinations revealed varying degrees of hepatocellular damage across all rat groups, with the severity increasing in correlation with the dosage of the extract. This study highlights the importance of dosage regulation when using *P. acidus* extract for therapeutic purposes, and further research is needed to prove the hepatotoxic effects of locally grown *P. acidus* found in Nueva Vizcaya.

*Keywords:* hepatocellular damage, hepatotoxicity, histopathological examination, liver function test, paracetamol-induced

**SHNS-SR-46**

## **Hypoglycemic Effect of the Aqueous Seed Extract of *Monguba* (*Pachira aquatica*) In Alloxan-Induced Diabetic Albino Mice (*Mus musculus*)**

*Mirasol A. Binwag, Lady Krystal E. Domingo, Jasmine Hope C. Minia, Eugenie Lew D. Tiongson, Julianna Viktoria F. Tumibay, & Maria Shiela M. Ramos, RMT*

Diabetes, a disease with numerous health implications, has intensified the search for natural therapeutic alternatives. Hence, this study aimed to identify secondary metabolites in *Monguba* seeds and evaluate the hypoglycemic effect of its aqueous extract in alloxan-induced albino mice. A decoction was done to obtain the aqueous seed extract for the preliminary phytochemical analysis and oral administration. Ten male albino mice, acclimatized for one week, were induced with 150 mg/kg of Alloxan monohydrate. Five groups received different doses of the extract (100 mg/kg, 150 mg/kg, and 200 mg/kg), along with positive (Glibenclamide) and negative (NSS) controls for comparison. Descriptive analysis and average rate of decrease were employed to monitor blood glucose levels, predicting the concentration with the greatest hypoglycemic effect. The phytochemical screening detected six metabolites: phenols, coumarins, tannins, flavonoids, steroids, and amino acids. Furthermore, results showed that 150 mg/kg of Alloxan monohydrate raised blood glucose levels to diabetic ranges after 48 hours, while control groups showed either a continuous increase or a predictable decrease. Additionally, the 150 mg/kg and 200 mg/kg concentrations of the aqueous seed extract of *Monguba* demonstrated hypoglycemic effects, with the 150 mg/kg dose exhibiting the most noticeable hypoglycemic effect based on its average rate of decrease. These findings highlighted the potential of *Monguba*'s aqueous seed extract as a natural hypoglycemic agent, contributing to the growing evidence supporting the use of natural compounds in the management of high blood glucose levels.

*Keywords:* Blood glucose level, diabetes, plants, oral gavage, secondary metabolites

## SHNS-SR-47

### **Methanolic Oregano (*Plectranthus amboinicus*) Extract as an Alternative Natural Preservative for 24-Hour Urine Specimen**

*Alrey John J. Blanco, Chito II A. Bangunan, Romeliza O. Caldito, Kc Mae G. Dulhuan, Mary An L. Nah-hog, & Leonard M. Bulan, RMT, DTA*

In response to the toxic effect of the commonly used preservatives for urine, this study aspires to produce an alternative natural preservative for urine specimen. Experimental research design was employed. Thus, this study aimed to determine the effectiveness of the Methanolic Oregano *Plectranthus amboinicus* Extract as an alternative preservative for 24-hour urine specimens. Crude extraction was performed to acquire the MOE. The urine specimen is used to detect pH levels, urobilinogen, specific gravity, potassium, magnesium, phosphorus, ammonium, chloride, sulfate, and nitrogen. The 24-hour urine specimens undergo urine dipstick method. Comparative analyses were administered between refrigerator and boric acid to MOE, focusing on its effectiveness as a natural preservative. One-way Analysis of Variance showed that the values obtained from the methanolic oregano extract were not significantly different from those obtained from boric acid and refrigeration. This shows that the oregano extract-maintained urine sample integrity as well as the other two methods across all tested parameters. Based on these findings, the research concluded that methanolic oregano extract is a viable preservative option for 24-hour urine specimens. This discovery provides a potentially natural and accessible method for preserving urine in a variety of medical and research settings.

**Keywords:** Antimicrobial, boric acid, creatinine, dipstick method, refrigeration

## SHNS-SR-48

### **A Comparative Study of *Plectranthus scutellarioides* And *Phragmites vulgaris* Plant Extracts for Evaluation of Antiurolithiatic Activity**

*Reychele M. Lumaday & Jason Arnold L. Maslang, LPT, MAT, MBS*

Urolithiasis, the formation of urinary stones, remains a prevalent urological disorder with limited

effective preventive options. This study aimed to evaluate the antiurolithiatic activity of *Plectranthus scutellarioides* and *Phragmites vulgaris*, individually and in combination, using primarily *in vitro* calcium oxalate (CaC<sub>2</sub>O<sub>4</sub>) crystal inhibition assays and *in vivo* assays using *Rattus norvegicus* animal model. The experimental design involved the preparation of aqueous extracts and tea formulations from the plant materials, followed by qualitative phytochemical analysis to identify bioactive constituents. *In vitro* assessments measured the percent inhibition of CaC<sub>2</sub>O<sub>4</sub> crystal nucleation, aggregation, and growth, while *in vivo* studies employed a sodium oxalate-induced urolithiatic rat model to assess urinary parameters, biochemical markers, and electrolytes, as well as hepatotoxicity of the formulated tea. Phytochemical screening confirmed the presence of triterpenes, sterols, phenols, alkaloids, and fatty acids in both plants, with *P. vulgaris* also containing flavonoids and tannins. *In vitro* results revealed that *P. vulgaris* had the strongest inhibition across all stages of CaC<sub>2</sub>O<sub>4</sub> crystallization. *P. scutellarioides* demonstrated good antiurolithiatic activity, particularly *in vivo*, with improvements in urinary output and normalization of serum creatinine, urea, calcium, magnesium, and phosphorus levels. The combined extract showed moderate but consistent effects *in vivo*, suggesting additive benefits without synergistic enhancement. All treatments showed no signs of hepatotoxicity, as evidenced by stable alanine aminotransferase (ALT) levels. Overall, these findings highlight *P. vulgaris* as the most potent antiurolithiatic agent among the tested treatments, with *P. scutellarioides* also showing

therapeutic promise. The study also highlights the therapeutic promise of tea-based formulations for future application.

*Keywords:* antiurolithiatic tea, calcium oxalate, hepatotoxicity, kidney stones, serum kidney function

## SHNS-SR-49

### **Antimicrobial Activity of *Acalypha indica* (Bugos) Against Test Microorganism: Basis for the Formulation of a Broad-Spectrum Sanitizing Spray and Liquid Soap**

*Kelsy Joy A. Bartolome & Gregg Austine M. Balanag*

In today's time, more pathogens are becoming resistant to traditional antibiotics, and their environmental impact, finding natural, fair products and alternatives has become essential. This study evaluated the potential of *Acalypha indica* (Bugos) as a source of antimicrobial agents for formulating broad-spectrum sanitizing spray and liquid soap suitable for household use. The study employed experimental research involving ethanol extraction of bioactive compounds from *A. indica* plant using percolation. The extract was quantitatively evaluated through yield determination and Thin Layer Chromatography (TLC). Minimum Inhibitory Concentration (MIC), Minimum Bactericidal Concentration (MBC), and zone of inhibition assays were conducted to assess its antimicrobial efficacy against selected Gram-positive and Gram-negative bacteria, as well as fungi. The ethanol extract yielded 43.40%. MIC values as low as 15.6 µg/mL were observed, especially against *Pseudomonas aeruginosa*. Disk diffusion test produced inhibition effect on Gram-positive, Gram-negative bacteria, and fungi. However, tests conducted to determine the strength of the developed sanitizing spray and liquid soap were found to be low compared to commercial disinfectants, and thus, it could only be used as a household product. Such a result highlights the possibility of *Acalypha indica* being used as a natural disinfectant in home sanitation practices because of its antimicrobial properties. Additional studies must be conducted with separation and purification of active components, consistency in the concentration of preparations, and the long-term conditions of safety and stability of products in a broader application.

*Keywords:* Diffusion, ethanolic extract, inhibition, minimum bactericidal concentrations, minimum inhibitory concentrations

## SHNS-SR-50

### **Biological Activities of *Cyperus imbricatus* Retz (Shingle Flat Sedge) Leaf Crude Extract**

*Kylie Joy P. Tuguinay & Jason Arnold L. Maslang, LPT, MAT, MBS*

*Cyperus imbricatus* Retz. (Shingle Flat Sedge) is traditionally used in Ifugao to treat urinary tract infections. This study determined the biological activities of *C. imbricatus* Retz (shingle flat sedge) leaf crude extract using in vitro assays. Using an experimental design, ethanol-extracted leaf crude was screened for secondary metabolites via Thin Layer Chromatography (TLC) and tested for antimicrobial, antioxidant, anti-inflammatory, and cytotoxic properties through in vitro assays. Phytochemical screening revealed that *C. imbricatus* contains phenols, flavonoids, coumarins, and triterpenes that support the pharmacological potential of *C. imbricatus*. Antimicrobial activity was assessed against *Klebsiella pneumoniae* and *Pseudomonas aeruginosa*, in which no inhibition was observed. Strong antioxidant activity was observed in the DPPH assay, and strong anti-inflammatory activity in the egg albumin denaturation test. Cytotoxicity, determined via brine shrimp lethality assay, showed high

toxicity with an LC<sub>50</sub> at a very low concentration. An infographic poster summarizing the findings was shared with local communities to enhance awareness and promote informed use of traditional medicinal plants.

*Keywords:* Anti-inflammatory activity, antimicrobial activity, antioxidant activity, cytotoxicity, phytochemical screening

## SHNS-SR-51

### **Toxicity and Hepatic Effect of *Piper betel* (Betel Vine) Leaf Crude Extract On Wistar Rat**

*Nerie P. Cadingan & Alicia Z. Jubay, MAT*

*Piper betel*, commonly known as Betel vine, holds a prominent place in traditional medicine, particularly in Asia, for its wide range of health benefits. With this, the study investigated the toxicity and potential hepatic effects of *Piper betel* leaf crude extract on Wistar rats. It utilized experimental design. Using the up-down method, the result revealed that the median lethal dose of the extract was higher than 2000 mg/kg. This finding similarly suggests that the crude leaf extract demonstrates low acute toxicity, by the absence of mortality and the lack of observable physical or behavioral changes even at a dose of 2000 mg/kg. These results suggest that the extract possesses a wide safety margin and may be considered relatively non-toxic within the tested dosage range. The liver enzyme tests revealed that no significant hepatotoxic effects were observed in any of the dose groups based on liver enzyme levels and bilirubin concentrations; the extract did not induce significant hepatotoxicity at low, medium, or high doses. This indicates that the extract is considered safe at the tested doses and potentially suitable for further pharmacological development. Findings from the histopathological analysis indicate that *Piper betel* extract may provide protective effects against alcohol-induced hepatic injury. Hence, the positive result of this study contributes to the understanding of the plant's safety profile and promotes responsible application in both traditional and modern medicine.

## SHNS-FR-01

### **Implementation and Evaluation of LIFE (Love Intervention for Filipino Elderly) Program on Senior Citizens of a Municipality of Nueva Vizcaya: A Community-based Intervention**

*Melchora M. Bautista, RPh, MS Pharm, May Juliet S. Palina, RPm, RGC, & Leticia G. Ruiz*

This study aimed to implement and evaluate the LIFE (Love Intervention for Filipino Elderly) program among the chosen elderly in Bayombong. Specifically, it sought to describe the elderly respondents' physical health and wellness, social connection, and emotional support before and after the LIFE program using the World Health Organization, Quality of Life (WHOQoL) tool; describe the involvement and participation of elderly respondents during the program; and determine the impact of the LIFE program on their quality of life. Results showed marked improvements across multiple domains following the intervention. Before the LIFE program, respondents reported being only moderately contented with life (mean: 2.93) and health (mean: 2.85). After implementation, contentment with life increased to a great deal (mean: 3.75), and contentment with health also improved (mean: 3.24). Participation in physical, social, and emotional activities increased, with enjoyment in life and sense of meaning both rising from a moderate to great extent. Capacity for daily activities remained high, with mean scores improving from 4.14 (very much capable) to 4.40 post-intervention. Satisfaction with various aspects of life, including sleep, daily activities, personal relationships, and access to services, also improved, with the mean satisfaction score rising from 3.37 to 4.01. Emotional well-being showed notable gains, as the frequency of negative emotions such as irritation,

anxiety, and loneliness decreased from "quite often" (mean: 2.94) to "seldom" (mean: 2.29) experienced after the program. Respondents expressed high satisfaction with the LIFE program interventions, particularly social visits and emotional counseling, and identified a strong ongoing need for social and emotional support. The findings demonstrate that the LIFE program significantly enhanced the quality of life, well-being, and satisfaction of elderly participants in Bayombong, underscoring the value of structured, community-based interventions for older adults. Future iterations should focus on sustaining long-term program benefits through continuous connections and linkages for a more enhanced quality of life for the elderly population.

*Keywords:* contentment with life, emotional well-being, physical well-being, quality of life, social well-being

## **SHNS-FR-02**

### **Navigating Parenthood and Promoting Family Wellness: A Health Education Intervention for Parents of Exceptional Children Intervention**

*Benig, Sherylou A., PhD, Labangcoc, Marissa lyn A., Jontilano, Mary Rose C., & Bendoy, Genevieve R.*

Parents are challenged beyond challenges which includes having children with special needs who are fated to become totally dependent for life. However, with the SPED program offered to these children, maximizing their potential to become functional individuals in their families and communities makes raising them with ease possible. Parents on the other hand, play a big role in navigating the lives of these children but parents' self-care should not be neglected. Thus, equipping these parents with the right knowledge and skills through a health education intervention is deemed necessary. This qualitative phenomenological study aimed to explore the experiences of parents with special needs children across various domains of life. This study also underscores the importance of promoting responsible parenthood and promotion of family overall wellness. The sample size comprised of fifteen (11) participants who were mothers of special needs children currently enrolled in SPED Centers using an in-depth interview. Purposive sampling technique was utilized to collect samples. A semi-structured interview method was used to collect relevant data from the participants. Thematic analysis was adopted to analyze the data organized into themes. Five themes emerged namely parental response, process of acceptance, normalizing care, limited self-care, and advocacy. The results in this study highlight the challenges faced by the parents of special needs children, a basis in crafting a health education for parents in caring for their children with developmental disabilities and themselves.

*Keywords:* Parenthood, Children with Special Needs, Developmental Disabilities

## **SHNS-FR-03**

### **Land and Groundwater Vulnerability to Leachate and Heavy Metals: HEI-MLGU Environmental Risk Assessment of a Landfill Site**

*Elsa L. Cajucom, PhD, David M. Gayadang, Julieta A. Villanueva, Michael S. Catacutan, Vivien Junelle R. Almendra, & Shiela G. Gilo*

A sanitary landfill must be legally established to manage solid waste safely and environmentally. It is built and operated using engineering principles for efficiency. Mismanagement can lead to significant environmental risks, including groundwater and soil contamination, air pollution, and harmful gas emissions. This study assessed the physico-chemical properties of soil, groundwater, and leachate at the Bayombong Sanitary Landfill in Purok 7, Barangays Magsaysay and Busilac, Bayombong, Nueva Vizcaya, to inform a localized remediation plan. Soil samples from four landfill cells were analyzed for pH, nitrogen, phosphorus, and heavy metal content. Groundwater and leachate samples were examined for ammonia and nitrite concentrations. Results showed slightly acidic soil pH (5.2–6.0), which may limit nutrient availability. Nitrogen levels varied, with Cell 1—closed the longest—showing the highest concentration (106.65 kg/ha), suggesting accumulation through vegetation over time. Phosphorus levels fluctuated, with Cell 3 below optimal range. Cadmium (11.26–15.66 µg/kg) and lead (0.42–0.99 mg/kg) concentrations remained below EPA hazardous thresholds, indicating minimal industrial pollution. Groundwater and leachate samples revealed decreasing ammonia levels (4.2 to 2.0 mg/L) and reduced nitrites, reflecting microbial degradation. However, post-treatment ammonia concentrations still exceeded DENR Water Quality Guidelines. The landfill's clay-loam soil structure likely facilitated heavy metal immobilization, mitigating health risks. The study concludes that while the landfill poses low heavy metal risks, uneven nutrient distribution and residual ammonia require remediation. Recommendations include soil enrichment with compost and green manure, pH correction using lime, establishment of a wastewater treatment facility, enhanced ground, water protection, and ecological rehabilitation using native and nitrogen-fixing plants. Regular monitoring and community awareness programs are also essential. These interventions aim to support sustainable landfill operations in compliance with national environmental standards.

*Keywords:* ecological Rehabilitation, environmental monitoring, remediation, soil contamination, waste management

## **SHNS-FR-04**

### **Converting Biological Resources into Herbal-Based Ointment for Topical Application: Formulation and Efficacy Evaluation**

*Cathelyn C. Mariano, LPT, MA, Ma. Shiela M. Ramos, RMT, Gabrielle Christoph Eraña, RPH, & BLGU (Sitio Masina, Baretbet, Bagabag, NV)*

The use of biological resources such as plant extracts for therapeutic purposes is increasingly popular, even in communities with access to modern medicine, due to their significant healing potential and low side effects. Antimicrobial ointments are vital in healthcare for treating bacterial infections, wound healing, and preventing secondary infections. This study aimed to formulate and evaluate a topical antimicrobial ointment using ethanolic leaf extracts of *Sandoricum koetjape* (Santol) and *Cassia alata* (Andadasi/Acapulco) against clinically relevant skin pathogens. This research focused on the antimicrobial potency, optimizing extract concentration, and evaluating the physical and safety characteristics of the final formulation. Antimicrobial activity was tested against *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Candida albicans* using crude extract concentrations of 250, 500, and 750 mg/mL. Results revealed that Santol extract showed the most significant inhibition (active) against *Pseudomonas aeruginosa*, while *Cassia alata* extract exhibited strong antifungal activity (very active) against *Candida albicans*. Both extracts demonstrated moderate to strong activity against *Staphylococcus aureus*. Topical ointments were then formulated using the most effective extract concentration (750 mg/mL). The resulting products displayed desirable physical properties such as smooth semi-solid consistency, natural herbal scent, skin-compatible pH (5.1–6.6), and excellent spreadability. Safety assessment through patch and scratch tests confirmed the absence of edema, indicating non-irritating and well-tolerated formulations. Overall, result supports the potential of santol and andadasi as sources of natural antimicrobial agents in topical preparations. Additionally, a formulation guide was

developed to enable home- based preparation of ointments using plant-derived ingredients. For future utilization, the formulation guide will be disseminated to communities and train residents, enabling reproducibility and potential scale-up for broader use in community or clinical settings.

*Keywords:* antimicrobial activity, formulation guide, non-irritancy test, scratch-patch test, zone of inhibition

**Research Unit: School of Teacher Education and Humanities**

**Research Coordinator: Ivonny Lorvin Adducul, MAEd**

**Panel of Reviewers:**

| <b>Area of Specialization</b>                | <b>Name of Faculty</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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## **STEH-SR-01**

### **Relationship of Emotional Quotient and Academic Performance on the Criminology Licensure Examination**

*Judith A. Radam, Stephanie A. Litawan, Krixzyne Mae M. Sanchez, Janeil Rito, Rhoald Duane S. Lamsis, & Edwin Edilberto N. Mania, RGC, EdD*

Passing the Criminology Licensure Examination is a major goal for future law enforcement professionals in the Philippines. This study looked at how academic performance and emotional quotient (EQ) are connected, and how both affect students' success in the exam. Academic performance is based on grades and performance in criminology subjects, showing how well students are prepared mentally. EQ includes self-awareness, emotional control, empathy, and social skills—qualities that are important in the stressful field of law enforcement. Using a quantitative-correlational method, the study gathered data from criminology graduates by reviewing their grades and EQ test results. The findings show a moderate to strong link between high EQ and better exam scores. This suggests that strong thinking skills alone were not enough. Students with both good grades and high EQ handled stress better, stayed resilient, and performed well on the test. The study highlights the need for a well-rounded education in criminology. It recommends adding emotional quotient training to the curriculum so students can develop both academic knowledge and emotional skills. This approach can help future criminologists succeed in the exam and thrive in their careers in the criminal justice system.

*Keywords:* criminal justice, curriculum, knowledge, law enforcement, self-awareness

## **STEH-SR-02**

### **The Difficulties Encountered By the Philippine National Police in Handling the Violence against Women and Children (VAWC) Cases in the Province Of Nueva Vizcaya**

*Ma. Ylijah Conception J. Perido, Anne Cherry A. Ketkhong, Myra G. Molina, Jhoel Mark A. Aquino, Xydryck Jhunel P. Espiritu, & Alona C. Costales*

This study aimed to assess the challenges faced by the Philippine National Police (PNP) in handling Violence Against Women and Children (VAWC) cases in Nueva Vizcaya. Specifically, it sought to identify the most common types of violence committed, the difficulties encountered by PNP personnel, and whether these difficulties varied based on their profile variables such as age, years of service, municipality, and VAWC cases handled. This study utilized a purposive sampling method to choose individuals according to their position or some other standards. The researchers developed and adopted a checklist-type questionnaire to determine demographic profiles, such as age, years of service, municipality, and the challenges they face in handling VAWC cases. The study gathered data through surveys administered to 56 PNP personnel across 14 municipalities, highlighting variances in challenges based on officers' years of service, age, and the number of cases handled. The results show that the main reasons for their difficulties were victims who hesitated to file a case due to sudden changes of mind, uncooperative witnesses, and victims who were afraid to disclose the truth. The study also reveals that there are no significant differences in the challenges faced by PNP when grouped by age, years of service, cases handled, and

municipality. There is still a need to broaden the awareness not only of the victims but also of others to prevent such cases. The researchers recommend the distribution of flyers to enhance the knowledge of victims about their rights and available legal and psychological support. Future studies may explore ways to enhance PNP effectiveness in handling VAWC cases.

*Keywords:* awareness, community education, legal Support, PNP effectiveness, victim hesitation

### **STEHSR-03**

#### **Levels of Disaster Awareness and Preparedness in the Disaster prone Barangays of Bagabag, Nueva Vizcaya**

*Jean Chloe D. Leal, Renz Carl S. Gajelomo, Ashley Carleslie O. Abad, Tatiana Jane G. Vallejos, Jermain Von C. Cortez (+), & Hansen T. Villanueva, MA*

Typhoon and flooding were the most frequent natural disaster experienced by the municipality of Bagabag. Casualties and damages were inevitable during this catastrophic event making disaster awareness and disaster preparedness of residents essential. A study to measure the levels of disaster awareness and disaster preparedness of residents in the Municipality of Bagabag, Nueva Vizcaya was conducted focusing mainly on disaster-prone Barangays which include Bakir, Nangalisan and Paniki. This study utilized a descriptive-correlational research design that outlined the profile characteristics of respondents and relationship between awareness and preparedness of the respondents on disaster response. The overall total respondent in this study is 150. The result revealed that the respondents have a moderate level of disaster awareness suggesting the respondents possess a reasonable understanding of disaster-related information. In terms of disaster preparedness, respondents are moderately prepared. While they possess a fair level of readiness in various aspects of disaster preparedness, there are still notable areas that require improvement. Moreover, significant relationship between disaster awareness and disaster preparedness was established as the results indicate comparable ratings of “moderately aware” and “moderately prepared” which suggests that as people become more aware of disasters, their levels of preparedness tend to increase accordingly. The study highlights the importance of integrating disaster awareness and preparedness into community programs to enhance residents' understanding and readiness for emergencies. It emphasizes that widespread dissemination of disaster-related information and curriculum integration can guide effective disaster risk reduction strategies for policymakers and practitioners.

*Keywords:* community participation, evacuation plans, policymakers readiness, vulnerability assessment

### **STEHSR-04**

#### **An Analysis of Crime Trends and Effectiveness of Philippine National Police Preventive Initiatives in Dupax Del Sur**

*Camonayan, Gerlan P., Delos Reyes, Bryson M., Gullunan, Keith L., Haber, Chester G., Rañon, Teril Jun. G., & Vergara, Jonathan P.*

This study aimed to analyze crime dynamics and assess the effectiveness of crime prevention initiatives in Dupax Del Sur, Nueva Vizcaya from 2019 to 2023. Utilizing a descriptive quantitative research design, the study examined the profile of both index and non-index crimes based on crime type, sex and age of offenders and victims, location, time of occurrence, and case status. Conducted from October to December 2024, the research involved 56

participants, including 20 randomly selected police officers and 36 purposively chosen community representatives from nine lowland barangays. Data analysis employed frequency, percentage, mean, and standard deviation to describe crime trends and evaluate the Philippine National Police's (PNP) preventive initiatives. Findings revealed that index crimes were dominated by violations of RA 8353 (Anti-Rape Law), direct assaults, and grave threats, primarily committed by males aged 26–45, mostly in Barangay Dopaj during February and October. Non-index crimes frequently involved damage to property, physical injuries, and violations of RA 7610, with most offenders and victims being males aged below 25, concentrated in Barangay Gabut. Most cases were resolved or under preliminary investigation. The PNP's preventive initiatives—particularly in patrol systems, anti-criminality operations, and school safety—were deemed effective. The study recommends enhancing patrol deployment based on crime patterns, increasing community awareness, and improving crime prevention infrastructure in high-incidence barangays. Moreover, it proposes a training intervention for PNP personnel and suggests replicating the study in broader contexts to inform province-wide crime prevention strategies. These findings provide a foundation for sustaining peace and safety in Dupax Del Sur.

*Keywords:* crime trends, effectiveness, preventive initiatives

## **STEH-SR-05**

### **Seeking Significance: A Comparative Study on Understanding Purpose and Meaning in Life among the Elderly**

*Pia P. Liwanen, Myryle Kris D. Malcat, Najeane Aneirin D. Pineda, Shayne April N. Serquiña, & Pearl Via S. Coballes*

This study aimed to determine the purpose and meaning in life among the older adults in the different municipalities of Kayapa, Solano, Mallig, and Natonin. Circumstances like social isolation and feelings of loneliness, especially if they reside alone, face mobility challenges, or have suffered the loss of close friends and family members can significantly impact their perception of purpose and meaning in life. Therefore, this study also aimed to help foster psychological resilience, providing older adults with greater emotional stability and life satisfaction. This research employed a descriptive-comparative approach to investigate the sense of purpose and meaning in life among the respondents. The researchers also used Survey Questionnaire, Purpose in Life Test, and Meaning in Life Questionnaire in order to gather data among the respondents. The study revealed that the older adults had a high level of purpose in life ( $M=122.25$ ,  $sd=14.22$ ). Furthermore, significant differences in the level of purpose in life were found on source of income, marital status, residence, religion, and number of children, indicating that these variables play a meaningful role in shaping the older adults' sense of purpose. Moreover, the older adults also had a very high presence of meaning in life ( $M=30.27$ ,  $sd=4.75$ ) and a moderate search for meaning in life ( $M=24.50$ ,  $sd=8.65$ ). Significant differences were also found on residence, religion, children, and grandchildren. This indicates that even though older adults had a high sense of meaning in life they still seek for meaning in their lives.

*Keywords:* older adults, senior citizens, well-being, mental well-being, life satisfaction, quality of life

## **STEH-SR-06**

### **Gaslighting Experience among Faculty Members in a Higher Educational Institution**

*Ramos, Jihan Imabelle C., Bimmoyag, Anjolyn C., De Guzman, Maria Kathrina M., Santiago, Jennifer Rose T., & Soliven, Bryant*

This study investigates the prevalence, characteristics, and psychological consequences of gaslighting behaviors experienced by college faculty members within a higher education setting, drawing on Sweet's sociological theory of gaslighting and Leary et al.'s sociometer theory. Conducted in a university setting, the research employed a quantitative approach, utilizing descriptive, comparative, and correlational methods to analyze data collected from 83 full-time faculty members through an adapted version of the Gaslighting Behavior Questionnaire (GBQ) and the Rosenberg Self-Esteem Scale (RSE). Results indicate that overall gaslighting exposure among faculty was low, suggesting a relatively psychologically safe work environment. However, significant differences in gaslighting experiences were noted based on age, educational attainment, years of service, and academic department, particularly affecting older faculty, those with advanced degrees, and members of certain departments like Health and Natural Sciences. While self-esteem levels across the sample were generally moderate and did not significantly differ among demographic categories, there was a weak, non-significant positive correlation between gaslighting and self-esteem, implying minimal impact on self-perception in this context. These findings highlight that although gaslighting is not widespread, its presence in specific subgroups warrants proactive interventions, emphasizing the need for institutional policies, awareness training, and psychosocial support systems to safeguard academic staff against subtle psychological manipulation and enhance overall faculty well-being.

*Keywords:* Faculty well-being, workplace abuse, self-esteem, manipulation

**STEHR-SR-07**

### **Relationship of Parenting Styles and Study Attitudes and Methods Survey (SAMS) of Third-Year College Students**

*Maika Aban, Daisy Joy Itas, Davie Ace Pabelona, Irah Giselle Supnet, & Edwin Edilberto Mania, PhD*

This study investigated the relationship between perceived parenting styles and the study attitudes and methods of third-year college students. Employing a quantitative, correlational design with a non probability purposive sampling technique, data were collected from third-year students at Saint Mary's University (School Year 2024-2025) using the Adolescent Parenting Attitude Four Factor Questionnaire (APA-FFQ) and the Study Attitudes and Methods Survey (SAMS). While the majority of participants reported experiencing an authoritative parenting style, the findings revealed no statistically significant correlation between parenting styles and their motivation, time management, organizational skills, or study habits. This suggests that factors beyond parenting styles may exert a more influential role in shaping academic behaviors at this advanced stage of higher education. Furthermore, this paper synthesizes recommendations from a broader study, highlighting the interconnected responsibilities of students, parents, educators, guidance counselors, and university administration in fostering positive study attitudes and effective study methods. The significance of a balanced parenting approach, characterized by warmth, clear expectations, and open communication in promoting discipline and independence conducive to academic achievement, is underscored. Specific parental interventions, such as establishing study routines, cultivating a growth mindset, managing study anxiety, and modeling effective study habits, are proposed. The paper also recommends the adoption of interactive teaching methodologies by educators and the facilitation of parent-student workshops by guidance counselors to enhance understanding and collaboration.

Illustrative workshop modules focusing on communication, academic strategies, and collaborative action planning are presented. The encouragement of university administration

to engage with parents and communities in developing a supportive learning environment that addresses students' comprehensive needs is also emphasized. Finally, the paper proposes directions for future research to extend the study's scope across diverse academic levels and geographical contexts. Ultimately, this paper advocates for a comprehensive, collaborative strategy to enhance students' study attitudes and methods, thereby contributing to their overall academic well-being and success.

## **STEHSR-08**

### **Predictors of Life Satisfaction among Filipino Women in Midlife**

*Dawn Dave Cabading, Kathleen Summer J. Batara, Cyrille Anne A. Bacilig, Gabriel Demetrio B. Lubong III, & May Juliet S. Palina*

Midlife introduces complex transitions that significantly affect women's well-being. This study examined the predictors of life satisfaction among 152 Filipino women aged 40 to 50 from various municipalities in Nueva Vizcaya. Using a predictive-descriptive quantitative design, the researchers explored the influence of demographic variables and satisfaction across key life domains. Data were collected through standardized instruments, including Diener's Satisfaction with Life Scale and Loewe et al.'s Life Domain Satisfaction Scale. Results revealed that respondents were slightly satisfied with their lives. Multiple regression analysis showed that income status, educational attainment, religious affiliation, and employment status significantly predicted life satisfaction. Furthermore, satisfaction in the domains of finance, self, and work emerged as the strongest predictors. In contrast, age, relationship status, field of occupation, health, social life, leisure, and family showed no significant independent effect. The findings emphasize the importance of financial stability, positive self-regard, and meaningful work in enhancing well-being during midlife.

*Keywords:* Education, employment, family, health, leisure, social relationships, well-being

## **STEHSR-09**

### **Occupational Stress and Coping Strategies among the Manual Laborers of Nueva Vizcaya**

*Princess C. Castro, Ericka Chua, Ma. Paula Nicole M. Tamayo, Katrina P. Tayaban, & Reiner B. Dulawan*

This study explores the occupational stress and coping strategies among manual laborers employed by the Provincial Government of Nueva Vizcaya. Given the physically demanding nature of their work and the often precarious job conditions, the research aimed to determine their frequency of stress, identify the coping mechanisms they employ, and assess whether these experiences vary based on demographic and work-related factors. Using a quantitative, descriptive-comparative research design, data were collected from 203 randomly selected manual laborers through standardized instruments: the Occupational Stress Scale and the Filipino Coping Strategies Scale. Results revealed that the respondents generally experienced a moderate frequency of stress, with the highest stressors related to excessive workload, unclear job roles, and limited promotion opportunities. Significant differences in stress levels were found based on sex, educational attainment, employment status, and years of service. However, age and socioeconomic status showed no significant effect. In terms of coping, the most frequently used strategies were religiosity, problem-solving, and relaxation or recreation—indicating a preference for adaptive and culturally relevant coping mechanisms. This study underscores the importance of work conditions in stress management and provides practical recommendations for employers, policymakers, and psychologists to support the mental well-being of manual laborers. It also contributes to occupational psychology by

emphasizing the role of coping strategies in sustaining psychological resilience in labor-intensive professions.

*Keywords:* Coping strategies, employment status, job stress, manual laborers, occupational stress

#### **STEHSR-10**

### **Proactive Strategies for Teachers' ICT Competency Enhancement: Bridging Problems and Difficulties**

*Marjorie D. Tuguinay, Deborah P. Marigondon, Danah Shayne P. Dulay, & Haydee D. James, PhD*

The integration of Information and Communication Technology (ICT) in education is crucial as technological advancements continue to transform the field. This study assessed the ICT competence of public elementary school teachers in the Solano I district through a Quantitative-Qualitative approach, employing a descriptive-comparative method for quantitative data and a descriptive approach for qualitative data. Among 111 surveyed teachers, the findings revealed an intermediate overall ICT competence, with notable proficiency in word processing and intermediate skills across ICT Basics, Spreadsheets, Presentations, Information and Communication, and Computer Ethics and Security. Younger teachers (aged 21–33) exhibited higher ICT proficiency. At the same time, no significant differences were found based on educational attainment, teaching position, or seminar attendance. Key problems included unreliable internet access, insufficient ICT training, limited access to gadgets, inadequate ICT facilities, time constraints, and skill gaps. To address these difficulties, tailored capacity-building initiatives such as workshops, mentorships, and technology integration programs are recommended to enhance ICT competence and promote effective integration into teaching practices.

*Keywords:* Computer ethics and security, ICT basics, ICT competence, information and communication, information and communication technology, presentation, spreadsheet

#### **STEHSR-11**

### **Self-Diagnosing Tendencies among Senior High School Students**

*Gervin Troy V. Garcia, Princess Mae P. Marquez, Guia Monique T. Sumeg-ang, Merylle Joisce  
E. Vila, & Galo Augustine R. Nuestro*

The trend of self-diagnosis, based on the abundance of health-related information available on the internet, has lately been experienced increasingly, especially among young people. Neuroticism, the key personality feature that is expressed as emotional instability and stress susceptibility, may be a factor that affects individuals in their desire to engage in self-diagnosis. This study explores the self-diagnosing tendencies and Neuroticism levels of Marian students from the Senior High School Department. The study conducted is quantitative in nature and used a descriptive research design. This enabled demographic data collection, including gender, sex, grade level strand, and social media usage duration. Results were analyzed using statistical analysis. Results revealed that senior high students have a moderate tendency to self-diagnose using information from social media. Majority of senior high school students have moderate to high levels of neuroticism, showing signs of anxiety, stress, or emotional instability. The correlation analysis between self-diagnosing tendencies and levels of neuroticism reveals a moderately positive relationship with p-value of .0001. A comparison of self-diagnosing tendencies across multiple variables indicated no statistically significant variations according on sex, strand, age, or duration of social media use. However,

a statistically significant difference was seen in grade level. For neuroticism levels, statistically significant differences are seen in terms of sex and the duration of social media use. Findings of this study can be used as a basis for contributing knowledge and providing interventions for adolescents who engage in self-diagnosis and social media.

## **STEH-SR-12**

### **Appearance-Related Social Media Consciousness and Body Dysmorphic Disorder Symptoms among Filipino Adolescents**

*Lester G. Pumihic, Dejannes Marie S. Franco, Jyrus Alain M. Bulatao, Renna Iana R. Mendoza, & Leslie Doris M. Divina, RPm, RGC*

In today's digital age, where social media significantly influences self-image, concerns about body appearance have become increasingly prominent, particularly among adolescents. This study aimed to explore the psychological implications of negative self-perception, focusing on Body Dysmorphic Disorder (BDD) symptoms as a clinically relevant aspect of body image disturbance. Specifically, it examined the correlation between Appearance-related Social Media Consciousness (ASMC) and BDD symptoms in terms of Total Appearance Anxiety (AAI) and its subscales—Threat Monitoring, Camouflaging, and Avoidance—among Filipino adolescents at Saint Mary's University Senior High School, and the Junior High School and Science High School. Using a quantitative research design, data were collected via self-administered questionnaires distributed to the target participants. Results revealed a high positive correlation between ASMC and BDD symptoms. Age and sex significantly influenced these concerns, with females and older adolescents reporting higher levels of ASMC and BDD symptoms. Conversely, socioeconomic status had no impact, highlighting the universal nature of these issues across economic backgrounds. Findings suggest that while Filipino adolescents exhibit moderate levels of ASMC and mild BDD symptoms, the upward trend among females and older age groups indicates a growing vulnerability to heightened body image concerns exacerbated by social media influence and the potential development of more severe BDD symptoms.

*Keywords:* Body image concerns, internet, photo-based social media, psychological well-being, teenagers

## **STEH-SR-13**

### **Exploring the Adaptability of Junior High School Students with Balikbayan Parents: A Phenomenological Study**

*Colobong, Kyrie Aliezon F., Garcia, Allyssa Jane B., Rabec, Khayla Greta Mae G., Valdez, Erika Therese D., & Leslie Doris M. Divina RPm, RGC*

Working overseas has become a common trend in the Philippines. With the parents being gone for a long period of time, this has caused their children to fall back on having to develop different coping mechanisms and changing perceptions upon their parents' return. This study uncovered the ability of the left-behind children of OFWs who are Junior High School students from Saint Mary's University to adapt with the changes in their lives brought by their balikbayan parents who return home temporarily in order to shed more light on this specific trend. The study utilized a qualitative approach, specifically the descriptive phenomenological method. This enabled the researchers to gain a deeper understanding regarding the perspectives of the left-behind children of OFWs about their parents. Through use of Colaizzi's Descriptive Phenomenological Method of analysis, Nine (9) key emergent themes were generated to explain the adaptation of the Junior High School students namely constant communication and pieces of advice, spending quality time, detachment, extended family and

other support systems, understanding family set-up and acceptance, avoidance, adjustment and compromise, motivation and aspirations, and comfort and material support. This study may be imperative to future researchers, balikbayan parents, guardians, psychologists and guidance counselors as it offers insightful information regarding adaptation.

*Keywords:* Behavioral adaptability, Coping mechanisms, Cognitive adaptability, Emotional regulation, Left-Behind Children, Marian Coalition of Sons and Daughters of OFWs, Perceptions, Qualitative approach

#### **STEH-SR-14**

##### **Patient's Death: Lived Experiences of Nursing Students in a Private Institution**

*Kyrie Eleison M. Andres, Josh Tyrone D. Angat, Lorie Jane M. Buquel, Beryl Claire B. Magno, & Alfredo Julio A. Montoya*

This research explores the lived experiences of 3rd and 4th-year Nursing students at Saint Mary's University concerning patient deaths during Clinical Duties. This study aims to uncover unique insights within the context of Saint Mary's University, drawing on a synthesis of existing literature, including qualitative studies examining the emotional impact, the need for support and education, the importance of having coping mechanisms, and feelings of unpreparedness among nursing students globally. Through qualitative interviews with nursing students, this research seeks to shed light on student nurses' experiences with patient death encounters. By exploring these themes within the specific contexts of Saint Mary's University, this research contributes to a deeper understanding of the challenges and opportunities inherent in providing compassionate end-of-life care education and support to nursing students.

*Keywords:* Clinical duties, death, end-of-life care, lived experiences, nursing students, patient-death

#### **STEH-SR-15**

##### **Enhancing Marian Voters' Education by Faith and Votes: How Bloc Voting Shapes Marian Students' Electoral Freedom**

*Montañez, Mikaela Nicole B., Gallera, Sandra Isahvel C., Asuncion, Gwynette Gyle M., Nadia, Jesalyn D., Derije, Leanne Jaye C., & Damayon, Samuel B.*

The intersection of religion and electoral behavior in the Philippines continues to raise concerns about voter autonomy, particularly among youth voters. This research examined how collective voting practices influence the political independence of university students affiliated with various religious groups. Using a descriptive-comparative design, a structured questionnaire was administered to 360 registered student voters from different academic departments and religious affiliations within a diverse university community. The study assessed students' alignment with legal provisions on suffrage, their behaviors toward coordinated voting behaviors, and the degree of perceived influence exerted by religious and social groups. Quantitative data were analyzed using t-tests and ANOVA to explore variations in perception based on academic background, sex, and religious affiliation. Findings revealed that participants strongly support constitutional provisions on suffrage and reject electoral misconduct. Participants generally disagreed with the practice of bloc voting and it was perceived as moderately influential, with respondents acknowledging its effect on electoral outcomes and the social pressure it creates. No significant differences were found in perceptions based on academic program or sex; however, religious affiliation showed a notable impact on perceived influence. The findings revealed a clear tension

between upholding community unity and exercising personal choice. In response, the study proposed an educational initiative that encourages reflective decision-making and enhances awareness of electoral rights. The research offers valuable insight into how institutional, cultural, and spiritual contexts shape student voters' behavior, contributing to broader discussions on promoting informed and autonomous participation in democratic processes.

*Keywords:* religion, electoral behavior, voter autonomy, collective voting practices, political independence, social pressure, awareness of electoral rights

## **STEH-SR-16**

### **The Pulse of Demagoguery and Populism: An Insight into Saint Mary's University Students' Knowledge**

*Valienmae T. Orani, Julius Jan S. Duntugan, Princess Pearl S. Pagadut, Junette C. Addug, & Kenneth L. Maslang, PhD*

Demagoguery and Populism are two interconnected ideas, similar but different from each other. In a representative democracy, these two political concepts are used as a means for governance that can be used positively or negatively, which is why individuals should be careful and critical enough in identifying their characteristics and implications. By examining the level of knowledge of demagoguery and populism among the students, the researchers sought to understand their potential implications on democratic governance. Through the use of a descriptive comparative method, the researchers measured and compared the demographic and socio-economic profile of respondents from Saint Mary's University and their levels of knowledge on demagoguery and populism through a survey questionnaire with two open-ended questions. Based on the results, there was a positive correlation between the level of knowledge of respondents on the concept of demagogue and populism, with no significant difference in the responses regarding the students' level of knowledge when grouped according to profile variables, wherein respondents generally possess a "knowledgeable" level. Furthermore, there was a balanced representation across different schools, indicating a broad perspective of the study. At the end of the study, the researchers recommended (1) integration of civic engagement into the school's curriculum, (2) enhancing awareness campaigns and integrating discussion on political expression into the curriculum, (3) creative exhibition, (4) media literacy education, and (5) organizing on-campus educational activities regards to demagoguery and populism. These recommendations aim to improve the students' knowledge of demagoguery and populism, thereby improving the students' political literacy and critical thinking skills.

*Keywords:* critical thinking skills, election, level of knowledge, political concepts, political literacy, local politics

## **STEH-SR-17**

## **Progreso Ti Umili: Public-Private Partnership Readiness of Municipal Officials in Nueva Vizcaya**

*Sabado, Justine Mae U., Dulay, Maverine S., Tobias, Dominique M., Lannu, Casey Alyson Z., & Aquino, Nicole Anne P.*

The unanticipated collaboration between the traditionally opposing sectors of society—public and private—engendered the prominence of the Public-Private Partnership (PPP) as a strategic mechanism to address infrastructure and service delivery needs. In light of the technical complexity of the matter, a readiness assessment is imperative to evaluate the current state of venturing bodies and to identify gaps that need to be proactively resolved. In Nueva Vizcaya, the Local Government Unit of Solano (LGU) expressed interest in implementing PPP. This study assessed the readiness of municipal officials in the LGU through a mixed-methods approach, quantitative-qualitative, particularly descriptive-comparative analysis techniques and thematic analysis, on the basis of the legal framework and process of PPP. It also explored the perceived benefits and risks associated with PPP. The findings indicate that municipal officials are generally ready to implement PPP, possessing a moderate level of understanding and capability. Additionally, perceived benefits were mainly economic, while risks were attributed to governance administration and broader public sentiment. This study presents insights to municipal officials, experts, and stakeholders to collectively reinforce identified strengths and complete gaps to ensure ultimate readiness in the event of PPP implementation.

*Keywords:* Fiscal, public administration, infrastructure, Build-Operate-Transfer (BOT), Local Government Unit (LGU), public services

### **STEH-SR-18**

## **Philippine-China Conflict in the West Philippine Sea: Exploring the Awareness and Perception of Students in Saint Mary's University**

*Concepcion, Kayla Mae Gene M., Sevilla Rezel N., Bucayan, Marc David C., & Damayon, Samuel B.*

In a fast-changing political sphere, awareness of international political issues is of topmost importance. The West Philippine Sea dispute between China and the Philippines accentuates this importance, where shifting territorial claims challenge sovereignty, national security, and economic stability. This study investigated the awareness and perceptions of Filipino students at Saint Mary's University regarding this critical territorial conflict. A descriptive-comparative quantitative approach was employed to analyze how students from different colleges, year levels, sexes, and religions understand the issue on political, socio-economic, and geographical dimensions. Responses were analyzed using Mean to determine the level of awareness and chi-square and Mann-Whitney U tests to determine significant differences among groups. Findings revealed that most students are aware of the China-Philippines West Philippine Sea conflict, indicating moderate to frequent engagement and understanding of the conflict. Socio-economic aspects, such as their impact on fishermen and food security, were the most recognized. Political dimensions, including the role of international law and foreign policy, showed the lowest awareness. Notably, awareness varied significantly depending on academic department and year level, with fourth-year students and those from the School of Teacher Education and Humanities demonstrating higher comprehension. Female students also exhibited greater political awareness. This research highlights the need for targeted educational initiatives to bridge gaps in understanding the issue. It calls for dynamic, accessible campaigns to empower youth as informed citizens capable of defending national sovereignty and contributing meaningfully to the discourse on maritime rights for the promotion of international peace.

*Keywords:* Geopolitics, national sovereignty, youth awareness, West Philippine Sea, political education

### **STEH-SR-19**

#### **Unbreaking News: Exploring Public Reliance on Citizen Journalism Over Traditional News Reporting Through News Characteristics as Perceived Factors**

*Marielle G. Camonayan, John Lord V. Gaspar, & Vince Errol V. Lucas*

This study, "Unbreaking News: Exploring Public Reliance on Citizen Journalism over Traditional News Reporting through News Characteristics as Perceived Factors," investigates the growing preference for citizen journalism among Filipinos and its implications for the credibility and consumption of news. Drawing on a quantitative approach, the study examines how demographic factors such as age, socioeconomic status, and educational attainment influence reliance on citizen journalism versus traditional news outlets through news characteristics as perceived factors. Findings reveal that technological advancements and social media proliferation have empowered individuals to both produce and consume news outside established media channels, leading to a decline in engagement with traditional news sources. While citizen journalism offers immediacy and proximity, and diverse perspectives, it often lacks the editorial rigor and accountability of professional journalism, raising concerns about misinformation and bias. The study highlights the need for media literacy and the reinforcement of journalistic standards to ensure the public remains well-informed in an evolving media landscape.

*Keywords:* Citizen Journalism, Traditional News Reporting, News Credibility

### **STEH-SR-20**

#### **YOUR HONOR, HINDI KO NA PO MAALALA: An Analysis of Alice Guo's Case in X through the Lens of Samantha Haskell's Model of Cancellation**

*Agustin, Princess Juliana L., Calilit, Charlotte Mae M., Tomas, Jasmin Faith D., & Castillo, Lourdes Nieves H.*

The sharing of ideas and information forms the bedrock of human interaction, a process profoundly transformed by the digital age, enabling global connectivity while simultaneously giving rise to phenomena like "cancel culture." Defined as the withdrawal of public support for objectionable actions or opinions (Atske, 2024), "cancel culture" operates as a modern form of social punishment paralleling historical practices of public shaming (Wong, 2022). While local perceptions often deem it cruel, participants view it as a normal and progressive social mechanism. Recognizing its impact on the safe spaces of social media, this qualitative case study critically analyzes the cancellation process of Alice Guo on the X platform, utilizing Samantha Haskell's model of cancellation. This analysis aims to explain the specific mechanisms by which the cancellation unfolded, while also evaluating the applicability and limitations of Haskell's model in extensively covering and explaining this particular case. Utilizing thematic analysis, the researchers aimed to: (1) determine the specific cancellation process; (2) examine Haskell's model's applicability, noting similarities and differences; (3) identify the criteria and social conditions leading to public "cancellation" on social media; and (4) propose a modified cancellation model. This research contributes to a more complex understanding of cancellation cases and its implications for social dynamics in the Philippines.

*Keywords:* communication, social media, cancel culture, cancellation process, ACT model

### **STEH-SR-21**

## **TikTok Trends: Influence to the Communication Culture of Generation Z**

*Cherryleze P. Cutillon, Chezcha Ysabell C. Cerva, Karl Andrei Hyancy A. Dayao, & Lourdes Nieves H. Castillo*

This paper sought to discover and understand the Influence of TikTok Trends to the Communication Culture of Generation Z in terms of how these trends influence their communication, their perception of a generational communication gap, and their ability to maintain professional tones in formal contexts in. The study utilized a descriptive research design, and gathered data from 100 students from Saint Mary's University through an original questionnaire that was validated and tested for reliability. The study found that trends that appeal to the Gen Z's humor, are more likely to manifest in the communication culture of Generation Z, and that they are more inclined to manifest these trends in their communication as a form of self-expression, and as a means to form bonds and connections. The study also found that Gen Z perceive that there is an existing generational communication barrier between them and the older generation. The Gen Z perceive themselves to be able to maintain professional tones in formal spaces, although they manifest the influences of TikTok Trends in academic spaces when they deem it necessary and appropriate. Lastly, collaborative efforts, such as forums may foster better understanding of Gen Z and older generations' communication cultures and proposed academic interventions may create a healthier communication environment in the academe.

*Keywords:* TikTok Trends, Generation Z, Communication Culture, Communication Barrier

### **STEH-SR-22**

#### **Analyzing Speech Acts Shaping Public Opinion in the Editorials of Philippine Broadsheets**

*Laguit, Rechantonette M., Manglapuz, Abegail O., & Querol, Marites B.*

The study examines four editorials, "Closure" (October 2) and "Alice unbowed" (October 4) from *The Philippine Star*, and "End Hazing, Brutal Rituals for Good" and "I spy..." from *The Philippine Daily Inquirer*. Utilizing John Searle's (1977) Speech Act Theory as the analytical framework, the research identifies the types of speech acts employed, the illocutionary points present in the texts, and the perlocutionary effects observable through online reader responses. Through qualitative textual analysis, the findings reveal that both publications predominantly employ assertive, expressive, and directive speech acts to inform, persuade, critique, and emotionally engage readers while avoiding commissive and declarative forms. Notably, the editorials exhibit a consistent use of declarative sentence structures and a limited presence of interrogatives, suggesting a preference for authoritative expression over dialogic engagement. Additionally, the analysis of reader comments highlights perlocutionary effects, with responses ranging from support to criticism, indicating the editorials' role in provoking public discourse and reflection. This study contributes to the growing field of media pragmatics by demonstrating how Philippine editorials perform communicative functions that extend beyond information delivery. It underscores the value of user feedback as a perlocutionary measure and highlights the significance of speech acts in shaping public sentiment and journalistic influence in a digitally mediated society.

*Keywords:* Illocutionary points, newspaper, pragmatics, speech act theory, written discourse

### **STEH-SR-23**

## **Underlying Power and Prestige of Languages: A Marketscape Study in Bayombong, Nueva Vizcaya**

*Abayao, Faith A., Buduhan, Eric Dave A., & Asuncion, Zayda S., PhD*

The study examined the linguistic landscape of the Bayombong Public Market in Nueva Vizcaya, focusing on the types, functions, and categories of signs, the languages used, and community perspectives on language use. Using a mixed-method approach, it combined quantitative data from photographic documentation and signage tallying with qualitative insights from interviews with vendors and consumers. Findings showed a dominance of bottom-up signs, particularly commercial and advertising signage. Most signs served informational purposes, though a notable portion conveyed symbolic meanings. English was the most commonly used language, followed by Filipino and Ilocano, with minimal presence of indigenous languages like Ifugao. However, spoken interactions primarily involved local languages, highlighting a disconnect between written and spoken language use. Interview responses revealed that English is often chosen for its perceived modernity and broader appeal, while local languages are linked to identity and accessibility. This indicates that the market's linguistic landscape reflects both economic priorities and cultural affiliations. In conclusion, the Bayombong Public Market illustrates a complex sociolinguistic environment where visual language use emphasizes prestige and commerce, while everyday speech reflects cultural identity. The study contributes to ongoing discussions on multilingualism, language hierarchies, and inclusivity in rural public spaces.

*Keywords:* Language Use, Linguistic Landscape, Multilingualism, Signages, Sociolinguistics

### **STEH-SR-24**

#### **Elementary Teachers' Lived Experiences with the Department of Education's Project Drop Everything and Read (DEAR): Toward Crafting Supplementary Materials**

*Frances Leilanie P. Bayag, Marietonie Yanni C. Gabanes, Zyreen N. Vilorio, & Federicia C. Calauagan*

This phenomenological study investigated the lived experiences, beliefs, and perspectives of elementary teachers implementing Project DEAR at Bayombong Central School and SPED Center in Nueva Vizcaya. Through purposive sampling, twelve in-service teachers from grades 1-6 with advisory roles and at least two years of teaching experience participated in the research. Employing thematic analysis following Braun and Clarke's methodology, the study revealed that teachers face significant challenges including insufficient reading materials, overwhelming workloads, unclear directives, and inconsistent administrative support. Despite these obstacles, many educators developed creative, learner-centered approaches and observed improvements in students' reading fluency and engagement. Teachers recommended a comprehensive approach to enhance Project DEAR through collaborative planning, continuous professional development, active parental involvement, motivational strategies, and combined assessment methods validated by school officials. Based on these findings, the study led to the creation of a Self-Directed Learning Material (SDLM) as a key outcome, designed specifically to address implementation gaps identified through teachers' experiences. This research provides valuable insights for improving literacy initiatives through enhanced resource allocation, clearer implementation guidelines, and stronger stakeholder collaboration to foster sustainable reading cultures in elementary education.

*Keywords:* literacy intervention, elementary education, phenomenological study, reading engagement, Self-Directed Learning Material

**Instructors' Extent of Inclusive Practices in Teaching Learners with Sensory Impairments in a Teacher Education Institution**

*Erica Shaine A. Delos Reyes, Kremlin Kurt Windeer Sanz, & Ivonny Lorvin M. Adducul*

This study explored the extent of inclusive practices among college instructors in teaching learners with sensory impairments at Saint Mary's University. It aimed to assess instructors' training and professional development, determine the degree to which inclusive teaching strategies are implemented, and identify challenges faced in inclusive classrooms. Using a quantitative-qualitative approach, the study was conducted in a private Catholic higher education institution, with 17 college instructors from the School of Teacher Education and Humanities identified through purposive sampling. Data were collected using a Likert scale questionnaire and a written interview with six open-ended items. Quantitative findings revealed that instructors exhibited an expert level of inclusivity, especially in communicative scaffolding strategies ( $M=4.56$ ), followed by personalized instruction and assessment practices. However, a notable gap in formal training, units earned, and certifications in inclusive education was identified. The qualitative data further highlighted common challenges, including insufficient preparation, limited access to adaptive teaching resources, time constraints, and a lack of institutional support. These findings underscore the importance of enhancing teacher training programs, developing accessible teaching materials, and establishing stronger institutional frameworks to support inclusive education. Ultimately, the study advocates for continuous professional development and systemic reforms to ensure equitable and effective education for learners with sensory impairments.

*Keywords:* Assistive technology, collaborative teaching, inclusion, teacher training, universal design for learning (UDL)

**Integrating Indigenous Learners' Narratives in Learning Resources (LRs) for Contemporary Issues**

*Ian Kristoffer M. Dela Cruz, Starlette Angel P. Bascos, Descel Faith G. Paculla, & Christopher Allen S. Marquez, PhD*

Indigenous students generally remain underrepresented in the Grade 10 Araling Panlipunan learning resources, particularly in the discussion of Contemporary Issues that reflects a lack of inclusive and culturally responsive educational materials. The study explored the narratives of indigenous students studying in Grade 10 Araling Panlipunan at Nueva Vizcaya General Comprehensive High School (NVGCHS). The researchers employed a descriptive analysis approach to explore Indigenous students' narratives on environment and economy, peace and politics, human rights and gender, and education, civics, and citizenship, using recorded interviews transcribed for pattern identification and contextual interpretation. Majority of the Indigenous students faced significant barriers to education such as natural disasters, socio-economic challenges, discrimination, and political marginalization, that lead to absenteeism,

academic setbacks, and limited participation in school and community activities. A contextualized learning resources for Araling Panlipunan 10 were designed to reflect their lived experiences, cultural identities, and social realities, ensuring inclusive, relevant, and responsive content that affirms their resilience and addresses systemic inequities. The use of the results of the study and the learning resources will contribute to a better understanding of the experiences of Indigenous peoples in broader and wider avenues.

*Keywords:* Civic, culture, education, environmental, human rights

## **STEH-SR-27**

### **Moves Analysis of Abstracts in Senior High School Research**

*Alyssa Faye S. Castillo, Hannah Suzette B. Uchayan, Jalia Meign M. Ucol, Ian Krizell C. Zarate, & Lady Valen Charon A. Dela Peña*

Writing an effective research abstract is crucial to informing potential readers of the overarching contents of a research paper. Although plenty of studies have been conducted about research abstracts in the undergraduate, graduate, and professional levels of education, few studies have concentrated on the Senior High School level. This study sought to identify and analyze the moves, steps, and move patterns in research article abstract of SMU Senior High School students. This study collected a total of twenty (20) research abstracts from Saint Mary's University's Senior High School Department— Five (5) was taken each from STEM, ABM, HUMSS, and five from (1) ICT, (2) AD and (2) HE. The Five-Move Model by Putri, Hermawan, and Muniroh (2021) was used to determine the communicative process and functions of the research abstracts through moves analysis. Results revealed that the different academic strands successfully established some steps from Putri, Hermawan, and Muniroh's (2021) model, while also failing to establish others. The HUMSS strand had the lowest frequency of all move/step patterns compared to the other strands. The ABM strand exhibited a higher frequency of patterns related to introducing the topic and stating the research problem (M1-S1 to M1-S4). In contrast, the STEM strand showed a higher frequency of patterns related to presenting and discussing the results (M3-S1 to M5-S4). On the other hand, the AD/HE/ICT strand demonstrated a balanced use of move/step patterns. The data also revealed a clear dominance of the traditional five-move structure (M1-M2-M3-M4-M5) in all strands, accounting for 65% of the observed patterns. Overall, this shows that the SMU-SHS researchers in the strands AD, HE, and ICT; STEM, ABM, and HUMSS lack knowledge of a well-written research abstract when applying the principles of the move patterns of Putri, Hermawan, and Muniroh. The findings highlight the importance of using models in teaching abstract writing in subjects like English for Academic and Professional Purposes (EAPP) and Practical Research in the Senior High School. Educators and curriculum planners can utilize these findings to develop genre-based research syllabi.

*Keywords:* academic writing, genre analysis, move patterns, research abstracts

## **STEH-SR-28**

### **Re-Writing the Narratives of Grade 7 Students through Focused Enhancement Activities (FEA)**

*Buahon, Shirlene O., Laza, Mhea Lei S., Lunag, Charlene B., Talusig, Kohlen Raye P., Taysa, Roanne Joy S., & Querol, Marites B*

Narrative writing is often regarded as the simplest form of writing because it mainly involves telling a story; however, it still requires certain skills to be effective, and students may still

struggle with writing even when drawing from personal experiences. This study aimed to identify the difficulties of Grade 7 students in narrative writing and address these through Focused Enhancement Activities (FEA). It also examined the effectiveness of these activities in improving students' writing proficiency. Employing a descriptive-associational method, the study found that the participants encountered difficulties across all five components of writing in the rubric, including content, organization, vocabulary, language use, and mechanics. The results indicated that both pre- and post-task scores remained at the beginning level of proficiency, with no statistically significant difference observed. These findings suggest that continued participation of students in writing intervention programs supports the improvement of students' writing skills and contributes to meaningful progress through consistent engagement.

*Keywords:* Narrative writing, writing proficiency level, focused enhancement activities

## **STEHSR-29**

### **Language Enhancement Activities (LEA): A Strategy in Teaching Descriptive Writing and Self-Concept Of Grade 7 Students**

*Hangdaan, Norlhyne Honnelore E., Mendoza, Jayne C., Martin, John Lester V., Reginalde, Richelle Dyan P., Ubbanan, Felizze Yana P., & Asuncion, Zayda S., PhD*

Writing is a fundamental language skill crucial for students to effectively communicate and express their ideas. Descriptive writing allows learners to fully explain what is on their minds in a creative and detailed manner. The more students can convey their message and feel that it is clearly understood, the more their self-concept builds up. However, writing also follows rules and mechanics, which prove to be somewhat difficult for students. Utilizing both qualitative and quantitative methods, this study explored the effectiveness of Language Writing Enhancement Activities (LEA) as a strategy for teaching descriptive writing. Specifically, it investigated LEA's impact on the descriptive writing skills and self-concept development of Grade 7 Junior High School students at Saint Mary's University, with 17 students in the academic curriculum as participants. It was conducted in six Saturday sessions, with two hours each. The researchers gathered data using two techniques: written tasks to assess students' descriptive writing ability, and written interviews to explore the improvement of their self-concept. Descriptive analysis and a two-tailed t-test were used for the quantitative data, while thematic analysis was applied to the qualitative data. Analysis of the results demonstrated that Grade 7 students exhibited a beginning level in their writing performance, with notable weaknesses across content, organization, vocabulary, language use, and mechanics. However, LEA has helped develop the students' self-concept. In addition, a significant difference between the descriptive writing proficiency level of the students in the pre-task and post-task was observed.

*Keywords:* Descriptive writing, Proficiency level, Self-concept, Writing Performance

## **STEHSR-30**

### **Navigating the Shift: Grade 7 Mathematics Teachers' Experiences and Perceptions from K to 12 to the MATATAG Curriculum**

*Valmin Joy B. Basilio, Dan Anthony V. Acosta, & Rowena A. Rivera, PhD*

The Department of Education introduced the MATATAG Curriculum to address issues in K to 12 (Kilag et al., 2024). This qualitative study explored how the Grade 7 math teachers at Nueva Vizcaya General Comprehensive High School managed the shift to MATATAG, focusing on curriculum changes, teacher readiness, challenges, and perceptions. Findings showed both curricula stress problem-solving and real-world application, but MATATAG is more focused

and constructivist. Teachers received training and materials, but struggled with limited time, complex content, absenteeism, and new methods. They appreciated MATATAG's streamlined content, basics focus, relevant lessons, digital tools, and improved assessments, but noted resource gaps, limited student support, and interdisciplinary challenges. The study underscores the need for ongoing training, resources, and administrative backing for successful reform.

*Keywords:* curriculum reform, instructional challenges, mathematical proficiency, pedagogical shifts, teacher preparedness

### **STEH-SR-31**

#### **Mathematical Modeling of the Number of Child Labor in the Philippines**

*Caper, Yardlie A., & Rivera, Rowena A., PhD*

Mathematical modeling is the process of using mathematics to represent, analyze and solve real-world problems. This study aimed to analyze the trend of child labor cases in the Philippines from 2006 to 2015 and develop a predictive model to forecast the number of child labor cases for 2016 to 2018. The study adopted a descriptive-predictive research design, using publicly available data from the Philippine Statistics Authority (PSA). Nine mathematical models, including linear, quadratic, cubic, quartic, quintic, sextic, power, logarithmic, and exponential, were tested to identify the best fit for predicting child labor trends. Based on the statistical metrics of R-squared and standard error, the quintic model provided the best fit. The findings showed a decreasing trend in child labor cases during the study period, with predictions suggesting further reductions in future cases. The sextic model forecasted a value of 60%, 37% and -16% for child labor cases by 2016, 2017 and 2018, respectively. The study recommends continued monitoring of these trends, refining predictive models as new data emerges, and promoting public awareness to support efforts in reducing child labor.

*Keywords:* Predictive modeling, R-squared, standard error, trend analysis

### **STEH-SR-32**

#### **Towards Data- Driven Approach: Utilizing Mathematical Modeling to Predict the Number of Child Abuse Cases in the Philippines**

*Joan D. Tiam & Donna Bee R. Tominez*

This study investigated the best-fit model for the number of child abuse cases in the Philippines. The study used a mathematical modeling approach to determine the best-fit model and the predicted value of 2017. The data was downloaded from the PSA portal. Based on the findings of the study, the decreasing trend of male and female child abuse cases in the Philippines from 2006 to 2016 suggests progress in addressing child abuse issues. The best-fit model is quintic. These predictions offer insights into the potential trajectory of child abuse cases in the Philippines and can inform preventive measures and resource allocation. Using the best-fit model, the predicted number of cases of male and female child abuse cases in 2017 is 1613 and 4521, respectively.

*Keywords:* Female Child Abuse Cases, Male Child Abuse Cases, Prediction of Cases, R-squared,

Trend of Child Abuse Cases

### **STEH-SR-33**

## **Lipon, Layag, Lunsad: Mga Piling Awitin Bayan Ng Mga Bugkalot**

*Jhenessa B. Liasoas, Jamila P. Lumidao, Wilhelm Jones A. Calinggangan, & Rodelio C. Gauuan*

Ang pag-aaral na ito ay ukol sa paglilikom, pagsasalin at pagbuo ng banghay aralin kaugnay ng kalipunan ng mga saling akdang awiting bayan ng mga Bugkalot na mula sa Journal of Northern Luzon na nagging basehan ng mga mananaliksik sa pangangalap ng mga datos. Isinagawa ang pag-aaral sa pamamagitan ng metodolohiyang palarawan ng mga awiting bayan, matapos maisalin sa wikang Filipino. Naging layunin ng pag-aaral na ito ay kung saan ag mga mananaliksik ay lumikom, nagsalin, nagtugma ng mga kompetensi at bumuo ng mga banghay-aralin. Bilang resulta ng isinagawang pag-aaral, matagumpay na naisalin ng mga mananaliksik ang nalikom na pitong awiting-bayan ng mga Bugkalot sa wikang Filipino. Naitugma ng mga mananaliksik ang mga isinaling awiting bayan sa mga tiyak na kompetensi ng Gabay Pangkurikulum, kaya't napagtibay na maaaring gamitin ang mga ito bilang kagamitang pampagtuturo. Dahil dito, nakabuo ng pitong banghay-aralin na angkop sa antas at kakayahan ng mga mag-aaral.

*Mga Susing Salita:* pagsasalin, pagtutugma, kurikulum, kompetensi, banghay-aralin

## **STEH-SR-34**

### **TikTok: Lunsaran Sa Pagtuturo Ng Filipino Sa Baitang 10**

*Michaela Trisha Joi P. Dela Cruz, Kristel-Ann B. Lagutan, Estephanie B. Panit, & Rodelio C. Gauuan*

Ang pag-aaral na ito ay tungkol sa panood ng mga video na makikita sa TikTok na may kaugnayan sa asignaturang Filipino, pipiliin at kukunin ang mga video na angkop sa Filipino 10 Quarter II, susuriin at tatayahin ang mga nakitang TikTok video batay sa isinasaad ng pamantayan, nakamumungkahi at nakabubuo ng banghay aralin gamit ang TikTok video bilang lunsaran. Ang layunin ng pag-aaral na ito ay masuri ang mga TikTok video ayon sa nilalaman, kaangkupan, teknikal na katangian at visual appeal. Ang pag-aaral na ito ay batayang deskriptibo sa pamamagitan ng paggamit ng kuwalitatibo at kuwantitatibong pananaliksik. Nailahad sa pag-aaral na ito ang mga teoryang Content-based Instruction, Multimodality at Connectivism. Kaugnay nito ang pagtutugma ng mga kompetensi sa kurikulum ng batayang edukasyon upang magkaroon ng batayan sa pagbuo ng mga kagamitang panturo para sa pagpapahusay ng pagtuturo sa ikalawang markahan ng Baitang 10.

*Mga susing salita:* TikTok, Banghay-Aralin, Multimodality, Pagtuturo, Lunsaran

## **STEH-SR-35**

## **Science Learning Environment and Critical Thinking Skills Of Grade 10 Learners in a Last Mile School: Basis for an Intervention Program**

*Trisha Mae M. Alayu, Ma. Suzeth D. Pacis, Alexis Kurt M. Llaneta, & Elsa L. Cajucom, PhD*

Teachers' understanding of students' perceptions of their science classroom environment and their critical thinking abilities is key to creating more supportive, engaging, and equitable learning spaces. This study explores how Grade 10 students at Tiblac National High School—an Ambaguio district last mile school—perceive their science learning environment and their own critical thinking skills during SY 2024–2025. Through a descriptive quantitative approach, the research used survey questionnaires to gauge students' views on their classroom environment and a paper-pencil test to measure critical thinking abilities. Findings revealed that students felt their science classes had low personalization, insufficient support, and only moderate inclusivity, with limited opportunities for independent learning and investigative activities. They also reported experiencing moderate participation but concerning instances of exclusion and a lack of recognition for student diversity. Additionally, students perceived that their classrooms allowed some level of autonomy, but the opportunities for investigative learning and differentiated instruction were minimal. Overall, most students' critical thinking skills ranged from poor to average, with only a few showing high proficiency. These results led to tailored recommendations aimed at improving both the classroom environment and critical thinking abilities, especially for last mile schools like Tiblac NHS.

*Keywords:* Abstraction; inference; drawing conclusion; perception; students' independence

### **STEH-SR-36**

#### **Challenges of Physical Education Teachers in Teaching Philippine Folk Dances among Higher Education Institutions**

*Wendy B. Tugadi, Jerome V. Mendoza, Ma. Lyka Nicole D. Ratcho, & Niño N. Baldonado*

This study examined the difficulties faced by Physical Education (PE) instructors in teaching Philippine folk dances within Higher Education Institutions (HEIs) in Nueva Vizcaya, Philippines. Thirteen Physical Education teachers from six HEIs were chosen by whole population sampling for the study, which used a descriptive-correlational research methodology. A validated questionnaire that focused on administrative, educational, student-related, and personal problems was used to collect data. The results showed that PE teachers have a lot of difficulties, especially when it comes to student variables like social pressure, lack of enthusiasm, and limited exposure. Time restraints, a lack of resources, and insufficient training were among the instructional difficulties. Teachers also mentioned administrative issues such as inadequate professional development opportunities and a lack of institutional support. Despite these limitations, the majority of respondents showed personal drive and interest in Philippine folk dances. Notably, there was little access to national and international training, and professional development options were primarily limited to the school and division levels. The study highlights the need for policy support, enhanced training programs, resource allocation, and curriculum development aimed at preserving cultural heritage through effective folk dance instruction. These insights offer valuable implications for educational institutions, policymakers, and cultural advocates seeking to strengthen cultural education in the Philippine context.

*Keywords:* Cultural Heritage, Higher Education Institutions, Instructional Challenges, Nueva Vizcaya, PE Curriculum, Philippine Folk Dances, Physical Education, Professional Development, Student Engagement, Teacher Training

### **STEH-SR-37**

#### **Pantawid Pamilyang Pilipino Program (4Ps) Beneficiaries Well-Being and Financial Literacy**

*Joananizzy H. Aban, Zyra D. Galap, Ana Camille B. Medina, Evelyn C. Vilorio, & Reiner B. Dulawan*

The Pantawid Pamilyang Pilipino Program (4Ps) is a conditional cash transfer initiative aimed at alleviating poverty and improving the well-being of low-income households in the Philippines. While it provides financial support for basic needs, its impact on financial literacy and overall well-being remains a key area of study. Financial literacy is crucial for managing resources, making informed decisions, and breaking the cycle of poverty. This quantitative research study aimed to determine the relationship between well-being and financial literacy among 4Ps household beneficiaries in Villaverde, Nueva Vizcaya. An independent sample t-test was used to assess well-being differences by sex, and a one-way ANOVA examined differences by civil status, educational attainment, type of family, and cash grants. Pearson Correlation determined the relationship between years in the program and well-being aspects. Results showed that respondents were least satisfied with personal savings and wealth. While the program has improved social and health-related well-being, its impact on economic empowerment remains limited. Beneficiaries were found to be moderately financially literate, indicating a need for focused interventions to improve their financial knowledge, behavior, and skills. The findings emphasize the importance of integrating financial education into 4Ps activities through the Department of Social Welfare and Development (DSWD). The government should also implement livelihood programs and support systems to promote self-sufficiency. Finally, future studies should compare 4Ps beneficiaries with non-beneficiaries to better understand differences in financial literacy, well-being, and economic resilience.

*Keywords:* Well-Being, Financial Literacy, Pantawid Pamilyang Pilipino Program (4Ps) Beneficiaries, Least Satisfaction, Moderately Literate

### **STEH-FR-01**

#### **Promoting Active Transportation: Evaluating Campus Walking and Cycling Facilities for Student Wellbeing – Perspectives of Students in Higher Education**

*Mary Grace Medina-Bulatao, Ph.D., Jones K. Liwan, Michael A. Gabriel, Jojie Mar M. Valdez, Zayda S. Asuncion, Ph.D., Madonna Dionx C. Gonzales, Ph.D., & Joseph Bubod*

This study examined the role of active transportation—specifically walking and cycling—in enhancing student well-being and promoting sustainability within university campuses. It assessed existing campus facilities from the students' perspective, emphasizing the need for improved infrastructure to support and encourage these activities. Findings revealed that students hold varying perceptions of active transportation, influenced by factors such as accessibility, safety, and the quality of infrastructure. Health benefits, cost savings, time efficiency, and distance were identified as key factors influencing their choice to engage in active transportation. While the physical, mental, and social benefits serve as strong motivators, several barriers hinder its adoption, including adverse weather conditions, safety concerns, inadequate infrastructure, and time or distance limitations. Overall, the study underscores the importance of creating safer, more accessible, and student-centered environments to promote active transportation as a viable and sustainable mobility option on campus.

*Keywords:* Sustainable Campus Mobility, Student Well-being, Campus Infrastructure, Sustainable Transportation

## **STEH-FR-02**

### **Bridging the Gap: Student Accessibility, Willingness, and Preferences for Telemental Health Services in the School Setting**

*Pearl Via S. Coballes, Kristine Ann L. Israel, Leslie Doris M. Divina, Joman J. Baliton, PhD, & Faridah Kristi C. Wetherick*

Students suffer from mental health issues that are not easily addressed by in-person counseling. While telemental health (TMH) intervention could be the solution, school implementation is limited. As the use of technology becomes increasingly ubiquitous among students, it is essential to explore how technology-aided platforms can expand access to mental health services. Therefore, this study examined student accessibility, willingness, and preferences for TMH services offered in schools. The mixed-methods study utilized surveys and focus groups with students and counselors in assessing how demographic, technology, mental health, and cultural factors influenced perspectives on TMH. Findings revealed that TMH was moderately accessible and underutilized, but students were highly willing to use this service and preferred TMH with high confidentiality and privacy features. Accessibility was found to be multidimensional and moderately influenced by culture, demographics, and mental health factors. Predictors of willingness to engage in TMH services include institutional trust, affordability, family communication, and positive past experience. While the regression model showed a modest amount of variance, it revealed that student attitudes and structural barriers like accessibility and technology, played a key role in shaping TMH preferences. Recommendations were on providing ecological interventions that promote TMH utilization in schools.

*Keywords:* telebehavioral health, online counseling, technology access, stigma, mental health, student preferences

## **STEH-FR-03**

### **Linking Environmental Education and Sustainable Development: A Study on the Eco-consciousness of Students of a Higher Educational Institution in Northern Philippines**

*Samuel B. Damayon, Edwin Edilberto N. Mania, PhD, Nicole Anne P. Aquino, & Ruthie Maye R. Padilla*

This study explores the crucial nexus between environmental education (EE) and sustainable development (SD) through an investigation into the eco-consciousness of students in collaboration with World Wide Fund for Nature (WWF) Philippines. In an era characterized by escalating environmental concerns and the imperative for sustainable practices, understanding the role of education in fostering environmental sustainability is paramount. The research employed a quantitative method approach, using a survey to comprehensively examine students' attitudes, knowledge, and behaviors toward environmental issues and sustainable living practices. Drawing upon a sample of diverse students across educational levels, the study found that at Saint Mary's University, students have a high level of environmental awareness, eco-consciousness, and environmental stewardship. It was further affirmed that those three environmental concepts are intricately influencing one another. The profile variables of gender, age, type of high school they graduated from, and religion are not influential or predictive of their environmental awareness, eco-consciousness, and environmental stewardship. However, school, year level, and ethnicity are influential or

predictive. Finally, Saint Mary's University is a fertile ground for environmental sustainability practices as the students have a high level of environmental awareness, eco-consciousness, and environmental stewardship, which are important dimensions of environmental sustainability. It was then recommended that its programs, projects, and activities be sustained and intensified to protect and conserve the environment.

*Keywords:* Environmental Education, Environmental Stewardship, Eco-consciousness, Environmental Sustainability

#### **STEH-FR-04**

##### **Harmony Within: Nurturing Marians' Lived Experiences on Belongingness and Peace**

*Susan A. Galamay, PhD, Benjamin Messakaraeng, Brian Baristo, & Rogene Gonzales*

Fostering sense of belonging and peace in school is fundamental in order to create a safe and supportive learning environment, nurture respect, empathy and fairness among students, and address issues on bullying, discrimination, violence, and inequity. Students who feel a strong sense of belonging to their academic community are more likely to engage in academic activities, seek help when needed, and persist in their educational goals (Goodenow & Grady, 2018). The sense of belonging in universities is closely linked to students' sense of peace and well-being on campus. As stated in the 2030 Agenda set by the United Nations for Sustainable Development, institutions should be strengthened in promoting peaceful, inclusive and just societies (SDG #16). The studies of Wilson and Lipsey (2018); Jones, Kljakovic, and Taylor (2018); Palaganas and Dela Cruz (2018) found that schools implementing restorative practices experienced reductions in suspension rates, improvements in school climate and increased feelings of safety among students. However, notable gaps on this area were identified such as perspectives and engagement of students themselves in shaping peace initiatives. This study aimed to determine the sense of belongingness among Marians in relation to their sex and cultural affiliations, explore their lived experiences on peace in the university. The study employed quantitative-qualitative approach, specifically descriptive design. A survey instrument was used to determine the level of sense of belongingness of the Marians. To explore the lived experiences of the respondents on peace, interview was conducted. Focus group discussion (FGD) was used to delve deeply into the students' lived experiences and surface insights and perspectives that may not have been captured in the survey. The findings were used as basis in the Project PEACE HUB: Promoting Empathy, Acceptance, and Civic Engagement by Harnessing Unity and Building Belongingness among Marians.

*Keywords:* Involvement, Promoting Empathy, Social acceptance, valued competence

#### **STEH-FR-05**

##### **Unlocking Sci-Math Minds: Exploring Classroom Culture with Manipulatives**

*Analyn A. Guevara, PhD, Lorna C. Aban, Domingo T. Guntalilib, Jr., Ronnie Bibas, PhD, & Florentino Aban Jr.*

Educational reforms have been called for to meet the global sustainable development goal on quality education. This much needed reform and the SDG 4 goals have also been aimed on the national level considering our global economic status and our students' standing in international examinations like Trends in International Mathematics and Science Study (TIMSS) 2022 and Programme for International Student Assessment (PISA) 2018. This need resonated even more with the similar results on the National Achievement Tests (NAT) which showed students' low positions in both Mathematics and Science among subject areas across Grade 6, 10, and 12 (DepEd, 2019). With these concerns, it is important to revisit and

understand classroom culture. This consequently implies the immense role of teachers in the classroom for the much desired educational development. As being said, teachers are essential in improving students' knowledge and skills to achieve the desired goals efficiently (Joshi et al., 2022). This qualitative-descriptive study aims to explore the Science and Mathematics classroom culture involving manipulatives. Mapping this classroom culture will define the selected science and mathematics junior high school teachers of Nueva Vizcaya teacher's experiences and practices in teaching science and mathematics and will characterize the needed training/ teaching-learning framework for professional development which will be disseminated to the participants and colleagues in the field. The data collection method will consist of semi-structured interview, observation, and document scanning. Thematic analysis and cross-sectional data analysis will be utilized to unveil/ provide a comprehensive understanding of the science and mathematics classroom culture. Ethical considerations will prioritize participant privacy, confidentiality, and emotional well-being. The research outcomes are intended to enhance the educational experiences of junior highschool mathematics and science teachers and will be openly shared with the academic community and beyond.

*Keywords:* transformation, teaching strategies, training needs, professional enhancement

#### **STEH-FR-06**

### **From Fear to Fluency: A Basis for Crafting Support Mechanism in Reducing Public Speaking Anxiety**

*Lysel I. Haloc, Ma. Ines R. Minia, & Chirbet C. Ayunon, PhD*

The importance of oral presentation skills is evident through its increasingly regular use in professional and academic settings, therefore, included as a core area of language learning. Speaking is one of the most challenging macro-linguistic skills to develop among learners, hence, public speaking is usually the most common activity that individuals dislike, fear, or avoid. Hence, this study aims to identify the level of public speaking anxiety among senior high school students in selected schools in Bayombong, Bambang and Dupax del Norte, Nueva Vizcaya. The study employed the quantitative approach with mixed methods, and purposive sampling in selecting the respondents. The results showed that a significant proportion of students experienced high levels of anxiety. Also, variables such as sex, type of school and strand are associated with differences in anxiety, while first language is not. Moreover, exposure to English reading materials has a limited relationship with public anxiety among students. Ultimately, the study also aims to serve as a basis in crafting a support mechanism that is geared towards the optimization of oral communication skills among students through the reduction of speech anxiety. The proposed support mechanism is titled, "Speak Easy: A Public Speaking Anxiety Reduction Support Mechanism". Therefore, this study has pedagogical implications for teaching and learning public speaking.

*Keywords:* public speaking anxiety, oral communication skills, anxiety reduction, support mechanism

#### **STEH-FR-07**

### **Pedagogical Planning and Practice for Indigenous Education: A Basis for an Integrated Framework for IP Education**

*Vince Errol J. Lucas, Marites B. Querol, Federicia C. Calauagan, & Krizelle Nova A. Lazam*

Integrating Indigenous Peoples Education (IPEd) can address the call for equality and justice. A need for further study on how teachers integrate IPEd in the teaching-learning process of diverse learners is needed. This research determined the extent of IPEd integration evident in the available instructional materials of teachers of a private educational institution, as well as

their thoughts in the integration process. The study made use of a modified checklist to determine the extent of IPed integration in nine general education courses and sourced out thoughts from six instructors of the general education courses. Results reveal that across the six areas, the integration of IPed is at the minimum. Considerable extent can be particularly be observed in materials, but remain minimal in terms of the other five areas. Indicators per area, however are varied in terms of the extent of IPed integration. Among the instructors' responses, seven themes arose which can be connected with the six areas. It can be concluded that the findings in terms of the extent of IPed integration may be related to distinct factors. The study suggests a crafted IPed Integration Framework (IIF) that can be used in the general courses offered at the tertiary level.

*Keywords:* evaluation of instructional materials, indigenous knowledge integration, IP education

## **STEHR-FR-08**

### **Legislative Competency of Sangguniang Kabataan Officials: A Catalyst for Youth Participation in Local Governance of a First-Class Municipality**

*Erwin Naval, PhD, Ernest Esmeralda, Diwata Donato, Xaviery Brent Galima, & Carlo Noel Gines*

Legislation stands as a cornerstone in any democratic system, demanding that legislators wield essential competencies to fulfill their roles as architects of local government. These competencies are not just desirable but indispensable for fostering nation-building. In response to the widespread mismanagement, ineffectiveness, and corruption plaguing the Sangguniang Kabataan (SK), the Philippine Congress enacted R.A. No. 10742, otherwise known as the Sangguniang Kabataan Reform Law. This study aimed to assess the local legislation competencies of the incumbent SK Officials of the Municipality of Bayombong. Specifically, it aimed to measure their communication skills, attention to detail, research aptitude, problem analysis and solution, information management, and influence and impact. This descriptive research employed quantitative approach to the SK Officials' competencies including the difficulties and challenges in performing their legislative mandates. Results show that SK officials' competencies in communication, research, problem-solving, attention to detail, and information management are good. Communication was the highest-rated competency, with officials showing strong interpersonal skills but needing improvement in openness to suggestions. Research aptitude was also noted as dependable, though many were less confident in leading research efforts independently. No significant differences were found in competency levels when respondents were grouped by position, indicating a consistent skill level across the board regardless of role. However, qualitative responses revealed widespread difficulties in legislative writing, particularly in structuring and formatting resolutions, and in understanding what content to include in the "whereas" sections. These challenges were largely attributed to a lack of training and formal instruction. Further difficulties included limited participation of council members, poor attendance during sessions, and internal conflicts that hindered the legislative process. SK officials also reported challenges balancing the needs of the youth with broader community goals, particularly in the face of limited resources and time constraints. Many found it hard to create actionable, realistic, and legally sound resolutions.

*Keywords:* Local legislation, SK resolutions, communication, attention to detail, research aptitude, problem analysis and solution, information management, influence and impact

## **STEHR-FR-09**

## **Dance Dynamics: Unraveling its Dual Role in Fitness and Social Interaction**

*Ronda L. Navalta, Niño N. Baldonado, Apolonio P. Espiritu Jr., Judy Ann P. Daga, & Dalarry L. Duldulao*

This study examined the perceived role of dance in promoting physical fitness and social interaction among participants from selected Higher Education Institutions (HEIs) in Nueva Vizcaya. Specifically, it investigated the relationships between demographic variables—such as age, years of dance experience, and dance style—and the perceived benefits of dance participation. Employing a mixed-methods design, the study utilized a structured questionnaire for quantitative data, analyzed through descriptive statistics and Pearson correlation, and supplemented these with qualitative insights from open-ended responses. Seventy active dance troupe members from five HEIs were selected via convenience sampling. Results showed that participants perceived dance as significantly beneficial to cardiovascular endurance, flexibility, coordination, and overall well-being. Social benefits included improved self-confidence, stronger peer connections, and greater emotional expression. Notably, no significant correlations were found between demographic variables and perceived benefits, suggesting a consistent impact of dance across age and experience levels. The study concludes that dance plays a vital role in supporting holistic health and social cohesion, highlighting its relevance in educational and wellness initiatives within HEIs.

*Keywords:* Movement dynamics, physical fitness, dance interventions, socialization

### **STEH-FR-10**

## **Stewardship Implementation and Lay Faithful Engagement in a Local Church in Northern Philippines**

*Jonathan P. Vergara, Loreta V. Garlitos, PhD, Roy B. Lumidao, Rev. Fr. Frans T. Balingan, & Rev. Fr. Romulo C. Felix, PhD*

The stewardship spirituality is a way of life where Filipino Catholic Christians are encouraged to become faithful and trusted church stewards by generously and gratefully sharing their talent, time, and treasure. And if they view themselves as stewards of God, it implies that they are to empty their minds and hearts of their selfish intentions of domineering creation and all graces from God and that they ought to denounce their belief and right to believe that all authority towards God's creation revolves around them. Thus, to raise the faithful of the local church of Bayombong to grow in spirituality as generous, grateful, faithful, and enthusiastic stewards. Thus, a three-year comprehensive plan was conceptualized, crafted, and implemented. This study will be conducted to assess the said spirituality program and the engagement of the lay faithful. It will employ the descriptive-quantitative-qualitative-evaluative approach specifically the descriptive design. A validated researcher-made survey questionnaire was used to gather pertinent data from the lay faithful. Data gathered were validated and substantiated through interviews and Focus Group Discussion (FGD) and were treated and analyzed using descriptive statistics (mean, and standard deviation). Results show that the Stewardship Program (Time, Talent and Treasure) is implemented to a moderate extent in the local church of Bayombong, and the lay faithful of the local church of Bayombong are moderately knowledgeable and moderately witnessing the said program in all areas. With these results therefore, crafting an enhanced formation module to deepen the knowledge and witnessing of the lay faithful of the local church of Bayombong to stewardship spirituality program that will eventually end the *arancel* system or "tariff" (practice of charging and collecting fixed fees or stipends for services of priests) that prevents the poor from receiving sacraments is to be crafted and be given to the lay faithful of the local church of Bayombong through seminar-workshop.

*Keywords:* Formation module, knowledge, talent, time, treasure, stewardship program, witnessing

## **INSTITUTIONAL POLICY-ORIENTED STUDIES**

### **IPOS-SAB-01**

#### **From Classroom to Career: Evaluating the Employability of SAB Graduates**

*Regina D. Ramel, PhD*

This study explores the employability of graduates from Saint Mary's University's School of Accountancy and Business (SAB), examining how well academic programs prepare students for professional success. Based on survey responses from 39 graduates, findings show that most are employed locally, while others pursue further studies, work abroad, or run their own businesses. Graduates have secured international roles in management, hospitality, and education, demonstrating the versatility and global relevance of their training. A majority found employment within three months of graduation, suggesting strong job market readiness. Graduates identified problem-solving, communication, and critical thinking as the most valuable skills in their current roles. Feedback also highlighted areas for curriculum improvement, including more practical learning, industry exposure, and integration of tools like QuickBooks and SAP. Suggestions included focusing on major subjects, reducing non-essential courses, and offering internships outside the province. These insights support educational theories emphasizing experiential learning (Kolb, 1984) and the integration of 21st century skills (Trilling & Fadel, 2009; Voogt & Roblin, 2012). The study concludes that SAB's programs effectively prepare students for diverse career paths, but ongoing curriculum enhancements are essential to meet evolving industry demands and support long-term career success.

### **IPOS-SAB-02**

#### **Curriculum Insights: Accountancy and Business Graduates' Perspectives on Skill Development and Program Effectiveness**

*Regina D. Ramel, PhD*

This study examines the effectiveness of the degree programs at Saint Mary's University, School of Accountancy and Business (SAB), in developing graduates' 21st century skills, personal attributes, and satisfaction with curriculum implementation. A mixed-methods approach was used to gather data from January 2025 graduates through surveys and interviews. Results show high ratings in life and career skills, problem-solving, and information literacy, alongside strong development in character and responsible citizenship. Graduates expressed satisfaction with administrative support, practical experiences, and classroom atmosphere. Internships, teaching style, and integrated board exam reviews were the most appreciated elements. However, concerns were raised about the retention policy, inconsistent teaching quality, and the overly theoretical nature of some subjects. Graduates recommended more hands-on learning, real-world case studies, and the inclusion of emerging topics such as artificial intelligence and data analytics. These findings align with Kolb's (1984) experiential learning theory, Trilling and Fadel's (2009) emphasis on supportive and relevant

instruction, and Voogt and Roblin's (2012) call for integrating 21st century skills into curricula. The study concludes that SAB's programs are well-rounded and effective in preparing graduates for diverse career paths, but continuous curriculum enhancement is essential to maintain relevance and improve student outcomes in a rapidly evolving professional landscape.

### **IPOS-OUR-3**

#### **Information Technology (IT) Students' Perspective on Artificial Intelligence: A Boon or a Bane?**

*Gertrude G. Danao, PhD*

Artificial Intelligence (AI) is being utilized to provide numerous benefits. AI is widely utilized in education, eBusiness, eCommerce, healthcare, and many more. AI though it is new is becoming popular because of the advantages that it provides to individuals. Consequently, the research respondents are IT students who are familiar with AI. The objective of this study is to determine the perspectives of IT students, specifically whether they regard AI as boon or a bane. This study made use of an AI generated questionnaire that will determine the IT students opinion on its positive and negative impacts, the most used AI tools or applications, their fears and concerns and perceived challenges. This study made use of descriptive statistics to analyze the data gathered. The results revealed that IT students are aware that AI has both its positive and negative impacts. The positive impacts are improved efficiency, automation, improved processes and outputs. Its negative impacts are its security, privacy and ethical implications. Similarly, IT students perceive that AI will result to job displacement and misuse. With these findings, the researcher recommends that AI be used responsibly and its perceived negative impacts be studied to determine if the identified concerns on its utilization is valid to lessen its impact.

### **IPOS-LMCDAC-O4**

#### **Gender Responsiveness of the Community Development Center of a Private Catholic Educational Institution in the Philippines**

*Christopher Allen S. Marquez, PhD, Elvira G. Tongson, & Marnuela Q. Dela Cruz*

One of the sustainable development goals is gender equality. This goal aims to ensure that women are not left behind in all aspects of development. To realize this, government units as well as academic institutions have included gender and development in their programs, projects and activities. This paper analyzed the gender-responsiveness of the LMCDAC as the extension arm of Saint Mary's University, revealing that it is still at the foundation formation level. The Center has promising GAD prospects in terms of project identification and design. However, it is invisible in the project implementation, and monitoring and evaluation. Results served as a basis for revising and enhancing the policies, guidelines, and ISO-controlled forms. It is recommended that these forms be utilized both by employees and student extensionists in their community development activities.

*Keywords:* community development, extension, gender and development, gender analysis, gender responsiveness

### **IPOS-CNS-05**

## **Mind the Waste: Assessing Awareness and Attitudes towards Solid Waste Management among University Students**

*Shenna Mae B. Decoro & Elsa L. Cajucom, PhD*

This study aimed to assess the awareness, attitudes, and practices of college students regarding solid waste management (SWM) at a private Catholic university in Bayombong, Nueva

Vizcaya. The research sought to determine the relationship between students' awareness, attitudes, and practices toward SWM and to explore factors influencing their engagement in environmental sustainability efforts. A quantitative descriptive-correlational design was employed. Data were collected through a structured questionnaire administered to students from six academic units: the School of Health and Natural Sciences (SHaNS), School of Teacher Education and Humanities (STEH), School of Graduate Studies (SGS), School of Accountancy and Business (SAB), School of Engineering, Architecture, and Information Technology (SEAIT), and the College of Law (CoL). Descriptive statistics and Pearson's correlation analysis were used to interpret the data. The findings revealed that students demonstrated moderate to high awareness and very positive attitudes toward SWM. Notably, SHaNS students scored the highest across all domains. However, a gap was observed between awareness and self-reported practices, indicating that knowledge and attitudes do not consistently translate into sustainable behavior. Correlational analysis showed strong positive relationships between awareness and attitudes ( $r = 0.60$ ), awareness and practices ( $r = 0.45$ ), and a moderate correlation between attitudes and practices ( $r = 0.35$ ). The study concludes that there is a need for stronger institutional support, including more accessible waste management infrastructure, regular awareness campaigns, and experiential learning opportunities to bridge the gap between knowledge and practice. Recommendations include integrating environmental education across all academic disciplines, fostering student-led sustainability initiatives, and refining teaching methods to ensure a comprehensive approach to SWM across the university.

*Keywords:* environmental education, recycling, sustainability education, university green initiatives, waste segregation

### **IPOS-CNS-06**

#### **Development of Environment and Christian Values-Oriented Chemistry Modules (ECCM) for Junior High School Special Science Program Learners**

*Elsa L. Cajucom*

This study developed and evaluated Environment and Christian Values-Oriented Chemistry Modules (ECCM) to integrate chemistry concepts with environmental principles and Christian values for Junior High School Special Science Program learners. The general objective was to create and validate the ECCM using the ADDIE instructional design model. Specific objectives included determining the feasibility of integrating environmental principles and Christian values in teaching chemistry, identifying the modules' instructional characteristics, and validating the ECCM regarding acceptability (content validity, format, presentation, accuracy) and usability (functionality). The study employed a Research and Development (R&D) design guided by the ADDIE model. Purposive sampling was used to select five chemistry experts to evaluate the modules. The modules integrated environmental principles such as "Everything must go somewhere," "Nature Knows Best," "Ours is a Finite Earth," and "Everything Changes" with corresponding Christian values. Two instruments were used: the DepEd Quality Assurance Tool and a Functionality Assessment Tool. Expert evaluations rated the modules as "Very Satisfactory" across content, format, presentation, accuracy, and functionality. The modules were deemed developmentally appropriate, scientifically accurate, well structured, and effective in promoting cognitive and moral development. The integration

of real world environmental issues and biblical teachings was found to provide a meaningful and holistic learning experience. The study suggests pilot-testing classroom modules, gathering student feedback, enhancing visuals and language clarity, and developing digital versions to improve the ECCM further.

*Keywords:* Chemistry education; environmental principles; module development; values integration

**IPOS-CNS-07**

### **Safeguarding Campus Water: A Preliminary Assessment of Microplastics and Microbial Pollution in SMU Groundwater System**

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Access to clean groundwater is vital for health and sustainability, particularly in academic institutions like Saint Mary's University (SMU) in Bayombong, Nueva Vizcaya. This preliminary study assessed microbial and microplastic contamination in SMU's groundwater to support sustainable campus operations aligned with UI GreenMetric standards and the United Nations Sustainable Development Goals. Water samples from multiple locations across SMU's Main Campus, Junior High School, and Grade School departments were analyzed using microbial culture methods and density separation for microplastics. Microbial analysis revealed no detectable coliform contamination, with all samples recording <1.8 CFU/100 mL—well within safety limits set by national health standards. These results indicate the groundwater is microbiologically safe for human use. The microplastic assessment identified low-density granular sediments but no fibers or colored fragments characteristic of synthetic plastics. This suggests limited current microplastic contamination, although definitive identification requires advanced analytical techniques. The findings affirm that SMU's water sources are safe and reflect positively on existing waste management and water infrastructure policies. The study highlights opportunities to strengthen sustainability efforts, such as promoting reusable water containers, phasing out bottled water sales, and integrating water stewardship education. Continuous monitoring and advanced testing are recommended to detect emerging risks and safeguard long term water quality. This research provides baseline data for water resource management and policy development within educational settings. It offers a replicable model for other institutions aiming to enhance environmental resilience and health protection.

*Keywords:* Groundwater quality, Microplastic contamination, Microbial analysis, Coliform bacteria, Campus sustainability, Water safety, Environmental monitoring, SDGs

**IPOS- IDQAO-08**

### **From Insights to Action: Policy Recommendations Based on Learner Satisfaction and Net Promoter Score Analysis**

*Harrison T. Villanueva, PhD, & Pearl Via S. Coballes*

Conducting satisfaction surveys is an effective measure of quality service, helping understand and improve services and the overall learner experience. This study assessed learner satisfaction with key university services and the overall learning experience, while identifying related issues, concerns, and recommendations. It used a concurrent triangulation mixed methods research design. Findings revealed that while learners were generally satisfied with university services, satisfaction levels varied significantly by school and indicator. Career preparation received the highest ratings, whereas campus facilities and equipment

consistently ranked lowest across both university services and learning experience domains. Notably, learners from the School of Graduate Studies and the Grade School reported higher overall satisfaction and promoter scores than others. Sources of dissatisfaction were problems with campus infrastructure (Wi-Fi, ventilation, restrooms), teacher behavior, and learner well-being issues such as academic pressure and mental health. Additional concerns included financial burdens, laboratory issues, and campus logistics. These findings underscore the need for holistic improvements across all university operations, prioritizing infrastructure upgrades, enhancing teaching quality, strengthening learner support initiatives, and addressing specific financial and logistical concerns to foster a more conducive and supportive learning environment.

*Keywords:* higher education, learner experience, learner satisfaction, learner satisfaction, university services

## **IPOS- PERIO-09**

### **Pre-Feasibility Study of Offering News Programs at Saint Mary's University Based on Student Preferences**

*Clara M. Gonzales, PhD, Madonna A. Blando, Mark Noren U. de Vera, Monaloufel Rosario F. Jasmin, PhD, Rocel Audrey J. Batara, Martin Gabriel T. Manuel, & Nicole Anne P. Aquino*

This study investigated the course preferences of senior high school students from the feeder schools of Saint Mary's University, collecting data from December 2, 2024 to January 24, 2025 during the School Visit program, which is spearheaded by the Promotions, External Relations, and Internationalization Office. The findings revealed that the following course programs were popular among senior high school students: BS Tourism Management – Cabin Crew, BS Hospitality Management – Cruise Ship, BS Mechanical Engineering, BS Dentistry, and BS Interior Design, proposed by the Schools of Accountancy and Business (SAB), Engineering, Architecture, and Information Technology (SEAIT), and Health and Natural Sciences (SHANS). The study's results will inform the university's management in planning new program offerings, ensuring that they are responsive to the needs and interests of prospective students.

## **IPOS- GTO-10**

### **Exploring the Career Wellness of Marian Students through the Career Wellness and Inventory Test (CaWIT)**

*Francisco, Richelle D., Mania, Edwin Edilberto N., PhD, Corpuz, Meca Jade M., Divina, Leslie Doris M., Palina, May Juliet S., Torres, Jennifer Ann M., Galamay, Florizza Lorraine B., Cornejo, Marc Gail M., Magday, Deophile Jeffnorson A., Pihulon, Berlyn B., & Soliven, Bryant M.*

The transition into higher education presents multifaceted challenges for students, especially upperclassmen, who must navigate academic demands, personal growth, and future career planning. To support this, the Career Wellness Inventory Test (CaWIT) was administered as a mandatory pre-enrollment assessment for 2nd to 4th/5th year students. This study analyzed the first-semester results of A.Y. 2024–2025 to identify key indicators of student well-being, academic performance, and career readiness. Findings revealed a significant association between academic failure and mental health concerns, as well as a lack of career clarity. Consistent with prior research, wellness was shown to be a multidimensional construct influenced by individual, academic, and institutional factors. Recommendations include expanding personalized support systems, integrating well-being into curricula, and increasing

the accessibility of mental health services. CaWIT proves to be a valuable tool for early detection and intervention, aligning with the university's mission to foster a resilient and successful student body.

*Keywords:* Academic Performance, Career Readiness, Quality Education, Student Well-being

## **IPOS- GTO-11**

### **Understanding Student Attrition at SMU: A Three-Year Review of Trends and Reasons**

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The study presents the attrition data of SMU students from Academic Year (A.Y.) 2022–2023 to A.Y. 2024–2025. The data is based on the results of the Transfer-Out Survey administered by the Guidance and Testing Office (GTO) to students who transferred out of the university. It evaluates the reasons students chose to leave the institution. The data highlights a year-on-year increase in the number of transferees, with the School of Health and Natural Sciences (SHANS)—particularly the BS Nursing program—consistently recording the highest attrition rates. In terms of year level, the majority of transferees were first-year students. Academic concerns, especially failed grades, were among the most frequently cited reasons for leaving. These issues often pointed to challenges in the student-teacher relationship, which significantly influenced students' decisions to discontinue their studies at the university. While some students expressed appreciation for how the university met their needs, several offered recommendations for improvement. These included the evaluation of instructors, hiring of additional faculty for certain programs, reduction of tuition fees, and regular assessments of students' well-being.

*Keywords:* Academic Concerns, Student Attrition, Students' Well-being