2nd CCC Institutional Conference on Education, Business, Information Technology, and Social Sciences 2023 (2nd CCC-ICEBITSS 2023)

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THEME:
“Reenvisioning and Fostering Resilient Outputs through Future-ready Researches towards Positive $VUCAD^2$ World"

EDITORIAL BOARD

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2024

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City College of Calamba

Welcome Address

Dr. Ronald A. Gonzales

Officer-in-Charge, Office of the College President
Conference Convener

As head of City College of Calamba, I am delighted to welcome all of you to the 2nd Institutional Conference on Education, Business, Information Technology, and Social Science (2nd CCC-ICEBITSS) in 2023.

This conference represents a crucial step forward in our path as an institution dedicated to academic quality, innovation, and societal impact. 2nd CCC-ICEBITSS 2023 brings together bright minds, educators, academic, and industry leaders to promote collaboration, exchange ideas, and push the boundaries of knowledge in education, business, information technology, and socialsciences.

As we convene here, we anticipate lively discussions, informative presentations, and meaningful connections that will not only increase our grasp of these important disciplines but also inspire new avenues of research and innovation. The many opinions and expertise displayed at this event reflect the lively intellectual community that City College of Calamba is delighted to foster.

2nd CCC-ICEBITSS 2023 is driven by our commitment to excellence in education, research, and community participation. This conference demonstrates our commitment to fostering multidisciplinary discourse and expanding the boundaries of research knowledge. I encourage each of you to actively participate in the parallel sessions, offer your experience and insights, and form long-term contacts that will help progress our respective academic disciplines.

Once again, I extend a warm greeting to all the conference personnel, resource person, external and internal panel members, faculty and student presenters, hybrid participants and viewers. May this conference inspire, collaborate, and generate transformative ideas for the future of education, business, information technology, and social science.

Conference Aims and Direction Setting

Prof. Maryann H. Lanuza
Vice President for Research and Innovation
Conference Chair

The City College of Calamba's 2nd Institutional Conference on Education, Business, Information, Technology and Social Science 2023 (2nd ICEBITSS 2023) aims to provide a venue for discussing relevant and innovative research ideas that can help envision and foster resilient outputs through future-ready research towards a positive DVUCAD (Diversity, volatile, uncertain, complex, ambiguous, and digital) world. The conference theme, "Reenvisioning and Fostering Resilient Outputs through Future Ready Researches towards Positive VUCAD2 World," highlights the objectives of exploring new perspectives, ideas, and approaches to make research outputs more resilient and future-ready. The conference seeks to bring together researchers, academics, students, and professionals to present and discuss the latest findings, trends, and concerns in the disciplines we are offering such as education, business and accountancy, information technology, computer science, and social sciences. It aims to promote knowledge sharing, collaborative research, and networking among participants. Presentations, papers, and projects related to topics such as pedagogical innovations, educational technology, information systems, business strategies, social issues, and other contemporary concerns are about to be shared later in the parallel sessions. The 2nd ICEBITSS 2023 also aims to inspire and motivate participants especially students and faculty researchers to develop innovative and impactful research ideas that can contribute to building a more positive DVUCAD community. Through insightful plenary talks of Dr. Gonzales about Strategic Collaboration and Partnership among HEIs for being a future-ready institution in Calamba and Dr. Alba et.al's study about Gender-mapping Territory of undergraduate research, Dr. Elipane's qualitative analysis workshop, and interactive sessions, the conference hopes to nurture a culture of excellence, resilience, and social responsibility among participants. Ultimately, your conference chair, yours truly, I hope that the discussions, collaborations, and outputs from the 2nd ICEBITSS 2023 can help provide practical solutions and recommendations that can help envision and foster resilient outputs towards a positive DVUCAD world.

Once again, enjoy the opportunity of learning from this morning until the afternoon, and take the ideas that you can use in your classroom. Biyayang Lamparang Pagbati muli mula sa Dalubhasaan. Salamat po.

PROGRAM OF ACTIVITIES MORNING SESSION		
7:30 AM	Conference Registration	
8:00 AM - 9:00 AM	Official Opening and Introduction to 2nd CCC-ICEBITSS	**Dr. Cincy Gecolea** *Research Facilitator, Science Cluster* *Master of Ceremony*
	Invocation and National Anthem	AVP
	Welcome Speech	**Dr. Ronald A. Gonzales** *OIC, Office of the College President* *Conference Convener*
	Objectives and Direction of the Conference	**Prof. Maryann H. Lanuza** *VP for Research and Innovation* *Conference Chair*
	Conference Intermission Number	**Arabella Mahinay & Marc Kenji Cordero** *CCC Himig Lakbayan Representatives*
	Introduction to the Resource Speaker	**Prof. Maryann H. Lanuza** *VP for Research and Innovation* *Conference Chair*
9:00 AM - 11:00 AM	Qualitative Data Analysis in an AI-Driven World	**Dr. Levi Elipane** *Associate Professor* *Resource Person*
11:00 AM - 11:20 AM	Awarding of Certificate and Open Forum	
11:20 AM - 11:50 AM	Guidelines of the Conference	**Dr. Peejay Gecolea** *Research Facilitator, Mathematics and Elementary Cluster*
	Introduction to the Internal and External Panel Members for Parallel Sessions	**Dr. Maricris Unico** *Parallel Session 1 Moderator* *Research Facilitator, Business and Accountancy Cluster* **Prof. Jacqueline A. Dela Torre** *Parallel Session 2 Moderator* *Research Facilitator, Information Technology Cluster*
11:50 AM - 12:00 NN	Conference Group Photo Opportunity	
12:00 NN- 1:00 PM	Lunch Break	

AFTERNOON SESSION		
	Parallel Session 1	**Parallel Session 2**
1:00 PM – 1:20 PM	**Addressing Concerns and Issues in Higher Education Institutions: A Summit for collaboration and partnership for Future-Ready HEIs** Dr. Ronald A. Gonzales *Plenary Speaker*	**Mapping the Gendered-Territory in Undergraduate Research: A Systematic Review** Dr. Simplicio Alba *Plenary Speaker*
1:20 PM – 1:40 PM	**The Utilization of Khan Academy in Teaching Calculus** Maria Angeline L. Malaluan, Trisha Carylle Martinez, Josh Riniel C. Gillaco, Lady Mae C. Dioquino *Bachelor of Secondary Education - Mathematics*	**From Modular to Blended Learning: Narratives of Science Major Students** Manuella I. Masiglat, Riño, Jasmine T., Kassandra Charlotte R. Tercero, Mary Jane Abaday *Bachelor of Secondary Education - Science*
1:40 PM – 2:00 PM	**Tiktok As Educational Tool for Interactive English: A Summative Content Analysis** Jessel G. Daprinal, Winniefer Joy S. Labrador, Julie Ann B. Manaig, Jervin R. Espiña *Bachelor of Secondary Education - English*	**Lived Experience of the Alternative Learning System Learners in Classroom Management: Input for Policy Development** Aliza Ann R. Manila, Eana Marie Cordez, Lanie D. Ruban, Shalby C. Almeria *Bachelor of Elementary Education*
2:00 PM – 2:20 PM	**Cross-Functional Alignment of Operational Processes and Sales Performance of Personal Collection- Calamba City Branch** Alexandra Nicole Cadiang, Edlyn D. Tulaylay, Danica Cleo Esquivel *Bachelor of Science in Accountancy*	**Inventory Management System for Camp Vicente Lim Integrated School** Marlon L. Reolo *Bachelor of Science in Information Technology*
2:20 PM – 2:40 PM	**Relationship between Providing Additional Score for Students (PASS) as an Incentive-Based System and Students' Attitude towards Mathematics** Lizelda T. Sambrano, *Bachelor of Secondary Education - Mathematics*	**Web-Based Evacuation Center Management System in Calamba City, Laguna** Jayzee P. Rafanan *Bachelor of Science in Information Technology*
2:40 PM – 3:00 PM	**Gender-Based Mental Health Assessment of City College of Calamba Students in the Philippines** Prof. Michael Jade Wania *Department of Computing and Informatics*	**ROBERT: Arduino-Based UV-C Disinfecting Robot using Path Memorization and A*Algorithm** Marc Allen David, Alvin John Conception, Mark Randell Baleros *Bachelor of Science in Computer Science*
3:00 PM – 3:20 PM	**Application of Multiple Machine Learning Techniques in Classifying Obesity Level using Multivariate Dataset** Prof. Jayvee Ryan Banal, Prof. Kenneth Lawas *Department of Computing and Informatics*	**Working Capital Management and Its Effect to The Financial Performance of Luisito Meatshop** Jennica E. Alcantara, Jonelyn H. Diangkinay, John Michael Q. Nono, Geraldine Joy M. Tagun *Bachelor of Science in Accountancy*
3:20 PM – 3:40 PM	**E-Learning Mobile Application for English 8: Streamlining Strategy for Effectual Pedagogy** Prof. Pamela Ostonal *Department of Teacher Education*	
3:40 PM – 4:30 PM	**Awarding of Certificates and Closing Ceremony**	

PLENARY PRESENTATIONS

ADDRESSING CONCERNS AND ISSUES IN HIGHER EDUCATION INSTITUTIONS: A SUMMIT FOR COLLABORATION AND PARTNERSHIP FOR FUTURE-READY HEIs

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ABSTRACT

The field of higher education is changing at a pace that has never been seen before. A number of causes, including changes in social expectations, technology advancements, the introduction of new learning paradigms, and the volatile, unpredictable, complex, and ambiguous (VUCA) environment brought on by the global pandemic, are responsible for this transition. This initiative's main goal is to foster communication, idea sharing, and the formation of strategic partnerships in order to help HEIs negotiate the complexity of today's educational environment and be ready for tomorrow's problems. The purpose of this research is to investigate the many issues that Higher Education Institutions (HEIs) face and to determine if strategic partnerships might help improve their future preparedness. The City College of Calamba hosted its HEI Summit last March 2023 and participated with seventeen (17) institutions with ten round table discussions, each table had two moderators who facilitated the focus group discussion, and at least eight to ten participants from different colleges and universities in Calamba. Data were transcribed, and analyzed through Thematic Coding using Phenomenological Inquiry Design. Each participant shared practices, challenges, and inputs on how strategic collaboration and partnership can be the name of the game and what activities shall foster sustaining quality education in Calamba. Salient themes about the practices they are doing are Industry-centric Curriculum, Inter-Institutional Collaboration, and Research-Based Learning. These are some practices they believed could be shared through shifting to a global competitive mindset, Emphasizing Micro-Level Collaboration, and Establishing Professional Associations. Also, some challenges that emerged were competition with public institutions, questioning the mandate, scope, and focus, and community-centric research. Moreover, collaborations and partnerships play significant roles in future-proof ready learners in VUCADD through inter-institution data accessibility, credential evaluation, and VUCA in Education. It is recommended to involve HEIs in the final draft of the HEI Strategic Collaboration and Partnership Framework aligned with the themes that emerged from this study to synchronize operations of the HEIs in Calamba to sustain quality and relevant future-proof education.

Keywords: Industry-centric Curriculum, Inter-Institutional Collaboration, and Research-Based Learning, inter-institution data accessibility, credential evaluation, and VUCA in Education.

MAPPING THE GENDERED-TERRITORY IN UNDERGRADUATE RESEARCH: A SYSTEMATIC REVIEW

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ABSTRACT

This research study aimed to address the United Nations Sustainable Development Goal of gender equality by focusing on establishing a gendered territory in undergraduate research at City College of Calamba (CCC). To achieve this, the researchers conducted a systematic review of undergraduate theses in the field of secondary education from the years 2017 to 2022, using the PRISMA framework. In total, there were 93 thesis papers reviewed, but only eight of them met the selection criteria. These eight theses were all characterized by their use of a quantitative-descriptive design, with four employing correlational and four comparative approaches. The primary focus of the majority of these studies was to investigate significant differences in perceptions between respondents when they were grouped by gender. The analysis of the gathered data revealed notable gender disparities and little emphasis on genuine gender issues or problems that affect both men and women as a result of the stereotypes and prejudice on the characteristics, capabilities, and behaviors that limit the understanding and appreciation of the roles of men and women and what they are capable of. Therefore, the researchers found a lack of in-depth research that specifically examined the gender issues and disparities in opportunities, rights, and access to research practices and policies. This lack of relevant theses in relation to gender and equality in the collected data must be considered for future policies and practices.

Keywords*:* gendered-territory, systematic review, sustainable development goals, gender disparities

ABSTRACTS
Faculty Researchers Category

GENDER-BASED MENTAL HEALTH ASSESSMENT OF CITY COLLEGE OF CALAMBA STUDENTS IN THE PHILIPPINES

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ABSTRACT

This paper aims to investigate the state of mental health of the students at City College of Calamba in the Philippines regardless of their gender. Using a quantitative approach, four hundred eighty-seven (487) college students responded with the validated questionnaire known as the College Adjustment Scale Assessment tool which was acquired by the institution. The average mean of 1.9255 which is interpreted as "Low Risk" means that the majority of the students in the institution appear to be dealing with typically pleasant mental states. If further implies that the respondents do not have significant or worrisome levels of mental health issues on average regardless of their gender. While individual experiences may vary, this overall low-risk rating suggests that, as a group, these college students are coping rather well with the numerous pressures and challenges that frequently accompany the college experience. Their mental health looks to be stable, and they may not be experiencing severe anxiety, depression, or other mental health conditions at levels that would cause immediate worry.

***Keywords*:** gender, gender-based, mental health, students, higher education institutions.

E-LEARNING MOBILE APPLICATION FOR ENGLISH 8: STREAMLINING STRATEGY FOR EFFECTUAL PEDAGOGY

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ABSTRACT

In this developing country where the major means of communication is through technology, the education system should not be left behind. This system enormously changes over time and generations. It is said that 21st-century learners should have 21st-century skills that are catered for by the formulation and implementation of instructional materials to provide meaningful and effective teaching and learning processes. The main objectives of this study are to develop and validate an e-learning mobile application for English 8 based on the topics in the 4th quarter of the school year 2017 – 2018 focusing on the applicable competencies to be attained. The designed e–learning mobile application for English 8 was validated by the Head and Master Teachers, English 8, and ICT Teachers of six (6) selected secondary schools and was evaluated through the pre-test and post-test of the 43 Grade – 7 Learners in the Division of Calamba City. Mean and 4-point Likert scales were used to determine the level of validity and acceptability of the designed e–learning mobile application for English 8. In addition, a T-test was used to identify if there was a significant difference in the performances of the learners in their pre-test and post-test. Based on the findings of the study, the results of the assessment made by the teachers/experts on the level of validity in terms of objectives, concepts, topics, directions, exercises, and reflections were all "Highly Valid" (HV). Similarly, the results of the assessment made by the teachers/experts on the level of acceptability in terms of functionality, accuracy, suitability, usability, and efficiency were all "Very Acceptable" (VA). On the test of significant difference in the performance of the learners in their pre-test and post-test, the probability value was less than the level of significance at .05. Therefore, it was concluded that there was a significant difference between the pre-test and post-test of the learners. Given the fact that the learners' post-test scores were higher than their pre-test, this presupposes that the designed e-learning mobile application plays a very significant role in ensuring better vocabulary development, better reading comprehension, and better grammar development. It also proves that the designed e-learning mobile application has a significant impact on learners' development and can be used as instructional material for the school years.

Keywords: e-learning, mobile application, strategy, pedagogy, instructional material, ADDIE design

APPLICATION OF MULTIPLE MACHINE LEARNING TECHNIQUES IN CLASSIFYING OBESITY LEVEL USING MULTIVARIATE DATASET

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ABSTRACT

People's health is important. It must be preserved. There are a variety of issues that might contribute to a person's health, including their lifestyle. One of the most prominent concerns during this pandemic is a person's body weight, which is particularly significant these days. Obesity is one of those body diseases about which it is important to be aware of the reasons. This study intends to create different machine learning models to define what causes obesity, select the most appropriate model that did the best, and discuss how accurately it performed. It can also be used in determining how obesity impacts our daily lives. Through the use of different machine learning models such as KNN, Random Forest, Gradient Boosting, and Ada Boost, the study be able to obtain the appropriate model. Despite being trained on unbalanced data, the classifiers utilized were able to predict the properties of the presented datasets Random Forest has an accuracy of 83.6%.

Keywords: Obesity, Datasets, Machine Learning, Random Forest, Gradient Boosting, KNN

ABSTRACTS
Student Researchers Category
(Parallel Session 1)

THE UTILIZATION OF KHAN ACADEMY IN TEACHING CALCULUS

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ABSTRACT

As technology takes over the education of today's generation, it is better to find an alternative wherein the educational software will be utilized in the classroom setting. The study aimed to propose an enhancement in the existing outcomes-based learning plan (OBTLP) in Calculus by examining the utilization of Khan Academy in teaching, and determining the (i) performance level of the participants, (ii) the difference in their test scores results, (iii) their satisfaction level, and (iv) the proposed OBTLP enhancement. The researchers used a quasi-experimental method on the 45 second-year college students taking the Calculus 2 course under the Bachelor of Secondary Education (BSE) major in mathematics at City College of Calamba through purposive sampling. The findings of this study show that utilization of Khan Academy has no difference with the instructor's approach, comparing the obtained p-value of 0.799 and 0.440 in their pre-test and post-test respectively through the use of the Mann-Whitney U test. Since the study used a non-parametric test, it does not follow normality. This implies that the utilization of Khan Academy is effective in improving the students' performance between the two tests but has the same results whether Khan Academy or the instructor's approach was used. With that, the researchers recommend prolonging the experimentation of the study and having a close interval of class time to obtain an accurate result. This study has made a significant contribution to the field of education by enhancing the quality and improving student performance in their Calculus course.

Keywords: Calculus, Educational Software, Khan Academy, Learning Tool, Teaching Tool

TIKTOK AS EDUCATIONAL TOOL FOR INTERACTIVE ENGLISH: A SUMMATIVE CONTENT ANALYSIS

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ABSTRACT

This study, titled "TikTok as an Educational Tool for Interactive English: A Summative Content Analysis," investigates TikTok's untapped educational potential within the context of Interactive English, addressing a critical research gap. The aim is to explore the relationship between TikTok content and Interactive English units, providing insights for secondary education stakeholders and examining TikTok videos' effectiveness as a learning tool for students. The study seeks to identify keywords, topics, and competencies in educational TikTok videos, enabling users to discern reliable information from potential misinterpretations. Methodologically, the study employed a systematic analysis approach, selecting 18 TikTok videos through maximal variation purposeful sampling. Guided by Hsieh and Shannon's (2005) Summative Content Analysis method, with adaptations from Bengtsson (2016), techniques included Decontextualization, Recontextualization, Categorization, and Compilation. Salient findings uncovered interconnected themes, focusing on public communication aspects such as nonverbal communication, self-perception, speech delivery, communication processes, models, listening, and dyadic communication. Results showcase TikTok's substantial role in enhancing English language skills and public speaking confidence. In conclusion, TikTok emerges as a transformative educational tool, particularly in Interactive English. This research contributes vital insights for communication skill enhancement, acknowledging limitations and urging future studies to explore TikTok's impact on diverse language learning aspects. Future research should encompass in-depth studies regarding the usefulness and effectiveness of TikTok as an educational tool, incorporating a broader range of keywords. It should also emphasize data privacy and content authenticity, fostering a comprehensive understanding of TikTok's educational influence.

Keywords: TikTok, Educational Tool, Interactive English, Summative Content Analysis, Systematic Analysis Approach, Qualitative, Learning Acquisition, Philippines, Asia

CROSS-FUNCTIONAL ALIGNMENT OF OPERATIONAL PROCESSES AND SALES PERFORMANCE OF PERSONAL COLLECTION-CALAMBA CITY BRANCH

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ABSTRACT

The main goal of the study is to create a proposed input for a policy framework in Personal Collection management by exploring the experiences of employees of the Personal Collection-Calamba Branch. Also, the study aims to collect quarterly sales for three consecutive years. The researchers used the convergent parallel method as research design; it is an efficient and popular approach to mixed-method research. The qualitative and quantitative methods were mixed to obtain the triangulated results in this study. Confirmation-purposeful sampling was chosen as the means of selecting participants with a total of eight (8) participants. The data have been collected by researchers through a semi-structured interview questionnaire and in-depth face-to-face interviews. The findings showed the importance and relevance of cross-functional alignment among different departments, as demonstrated through effective sales performances and operational responsibilities. These findings determined the development of a comprehensive policy framework which includes an enhancement for Segregation of Duties, Proper implementation of Inventory Management, Warehouse Vicinity Expansion, Implementation of 5 collaboration C's Model, Sustainability and Innovation of Marketing Strategies, Engagement in E-commerce Platforms and Activities, and Sustainability of Existing Company's Policy.

Keywords: cross-functional alignment, Collaboration, Operational Processes, and Sales Performance

RELATIONSHIP BETWEEN PROVIDING ADDITIONAL SCORE FOR STUDENTS (PASS) AS AN INCENTIVE-BASED SYSTEM AND STUDENTS' ATTITUDE TOWARDS MATHEMATICS

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ABSTRACT

There is a pivotal issue amongst Filipino students having negative attitudes toward mathematics impacting their performance. This implies focusing on assessing student's affective domain not only on the cognitive domain. Align with that, researchers emphasized the significance of students' affective domain by employing an incentive tool and integrating technology which is called the Providing Additional Scores for Students (PASS) card, which aims to increase the level of students' attitudes towards mathematics. For this reason, this study sought to determine the correlation between the assessed level of attitude and PASS as an incentive-based system through the adopted Attitude Towards Mathematics Inventory (ATMI) with subcategories: enjoyment, motivation, self-confidence, and values. And a self-made questionnaire to determine the effectiveness of PASS. Researchers gathered 34 Grade 8 students using purposive sampling based on the General Assessment for Proficiency (GAP) result and utilized a one-group pretest-posttest pre-experimental design. Appropriate statistical treatments were then used and exposed a slight increase in attitude level after PASS implementation, with corresponding values of WM=3.49, before and WM=3.55, after. Additionally, feedback on the effectiveness of PASS was generally positive. Statistically speaking, the results demonstrated a strong and significant relationship between students' attitudes and the PASS with $p(34) = <0.001$. In light of these findings, it is recommended that teachers implement effective incentive tools, such as the PASS card, to enhance students' attitudes by incorporating technology to foster motivation and values. However, for future reference, a deeper understanding of attitude could be achieved through interviews.

Keywords: Mathematics, Incentive-Based System, Providing Additional Score for Students (PASS), Affective Domain, Attitude

ABSTRACTS
Student Researchers Category
(Parallel Session 2)

FROM MODULAR TO BLENDED LEARNING: NARRATIVES OF SCIENCE MAJOR STUDENTS

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ABSTRACT

In the year 2020, the Coronavirus disease brought extensive changes in the Philippines that impacted the lifestyle of people, including education. Shifting learning delivery methods is necessary to continue to up-skill learners despite the situation. Modular and blended learning were introduced as alternative replacements, while face-to-face learning was restricted. Modifications made that learners should adapt to, such as the environment and mode of learning. However, there is a need to assess whether this transition positively influences science major students' understanding of complex concepts and their overall engagement with the learning process. In line with this, the study aims to know the experiences of selected third-year and fourth-year level Science Major students from City College of Calamba, considering they are the ones who first undergo the transition from modular to blended learning. It is objectively intended to (a) ascertain the learning experiences of Science majors as they transition from modular to blended learning, (b) determine the various issues that arise during modular to blended learning, and (c) provide informational material to contribute to the creation of effective teaching techniques in a rapidly changing educational environment. The sudden changes lead everyone to be exposed to various circumstances that no one is ready for, the phenomenon the first time happened, the same way to adjustments. Furthermore, it provided an opportunity for the researchers to utilize the findings to produce informative material, specifically a pamphlet. Awareness can offer resiliency to institutions, teachers, and learners in times when the shifting of modalities requires to implement again. The study is qualitative research that applied Interpretative Phenomenological Analysis as an approach. Selected participants were interviewed regarding their life experiences during the transition to distance learning. Based on the findings, seven themes emerged in the categorized responses. These are time management, self-learning, procrastination, the influence of technological devices, cheating, internet connection, and limited knowledge depth. The collected results are a crucial part of producing a pamphlet. An output contributes to preparedness through the guidance of information in line with the student's experiences if modalities that are different from traditional education need to be through again. Lastly, to shed light on the challenges that particular disciplines encounter as well as effective transitional approaches, future researchers are recommended to compare the experiences of science majors with those of students from other majors or academic levels.

Keywords: Modular Distance Learning, Blended Learning, Experiences of Science Major Student

LIVED EXPERIENCE OF THE ALTERNATIVE LEARNING SYSTEM LEARNERS IN CLASSROOM MANAGEMENT: INPUT FOR POLICY DEVELOPMENT

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ABSTRACT

This study examines how classroom management affects educational results to further education. By understanding classroom management, teachers may improve student involvement, academic accomplishment, and classroom atmosphere. This research may also lead to evidence-based approaches and therapies for improving student learning. This research will improve educational practices and policies, benefiting educators and students. This qualitative study used a semi-structured interview form for 11 ALS students at Looc Integrated School, selected through purposive sampling. Data analysis using thematic coding reveals themes and patterns. Thematic analysis helps grasp main concepts, interconnections, and probable linkages or contradictions. The study found five primary themes: Best Practices in Teaching and Learning, Learning Barriers, Repetition of Learning and Teaching, Timely and Constructive Feedback, and Resources. Researchers used participant data to develop subjects and uncover trends in this study. The results suggest that good teaching can enhance student engagement and performance. The paper focuses on addressing educational hurdles such as insufficient resources and teaching methodologies. Repeating learning and teaching techniques improves skills. Quick and constructive feedback can also help students progress. In conclusion, good learning environments and effective training require resources. The survey also found that students struggle to understand and apply complex concepts. Instead of a student-centered strategy that encourages active learning and critical thinking, teachers often impart knowledge to passive students. These classes also include exams and quizzes, which may not accurately assess students' abilities. Despite these challenges, participants explored classroom management and positive reinforcement. The report advised teachers to employ student-centered instruction, English language tutoring, and more evaluation. DepEd or the government must also fund educator professional development and training. Students would learn student-centered learning. Focusing on student needs and interests helps educators address varied learning needs and build an inclusive classroom. English language tutoring may also improve students' linguistic and social abilities, preparing them for academic and professional success. Finally, portfolios and project-based assessments may reveal students' talents and development better. This shift away from standardized tests is remarkable.

Keywords: Alternative Learning System, Classroom Management, Learners, Discussions, Visual Aids, Teaching Strategies, Policy, Curriculum, Social Inequity, Subject Knowledge, Teacher-centered, Student-centered, Limited Vocabulary, Assessments

INVENTORY MANAGEMENT SYSTEM FOR CAMP VICENTE LIM INTEGRATED SCHOOL

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ABSTRACT

The study aimed to design and implement an Inventory Management System for Camp Vicente Lim Integrated School to enhance its previous inventory management process. The system focused on assisting the school's property custodian in streamlining the inventory process, reducing the time and effort required to create reports and keep track of inventory. To achieve this, the researchers conducted an interview with the client to gather information about their current inventory management process and to identify potential solutions to their problems. The findings revealed that the school was facing significant challenges in inventory management, which included a lack of organization, and difficulty in tracking items and documents. The system aimed to enhance the inventory management process at the school by designing a system that used a QR code scanner. This feature would allow for a more efficient and streamlined inventory process by eliminating the need for manual counting and tracking of items. The system has a dashboard page that allows users to view the status and records of items in real time. Users could also make requests and reports easily without going to the school property and office. The system provided notifications for request acceptance and allowed both the admin and users to easily conduct inventory and generate reports. Overall, the system greatly improved the inventory management process and contributed to the overall development of the school's procedures.

Keywords: Inventory management system, QR code scanner, inventory, request, report

WEB-BASED EVACUATION CENTER MANAGEMENT SYSTEM IN CALAMBA CITY LAGUNA

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ABSTRACT

The main objective of this research was to design and create a system that would help the City Social Services Department (CSSD), particularly Social Workers and Daycare Workers, to reduce the manual work involved in recording and managing evacuations and evacuees. The study also aimed to develop an electronic management system for evacuation centers that recorded and managed information about each evacuee. The researchers used the descriptive-mixed method to examine the City Social Services Department's method of recording the process in evacuation centers. Data was gathered from social worker officers and daycare workers, and a survey was conducted to assess user experience with a web-based system developed for Calamba City, Laguna. As for the development of the system, the Agile Model was used, enhancing productivity and client satisfaction. The six steps assisted in system creation and the Agile Model was ideal as it tracked progress, allowed for adjustments, saved time and increased client visibility, and facilitated change requests. The findings showed manual processes, such as paper documentation and manual data entry, resulted in errors and the increased risk of data breaches has been resolved through efficient project development. Researchers recommended developing a management system to reduce workload and improve information accuracy.

Keywords: evacuation center, management system, descriptive-mixed method, agile model

ROBERT: ARDUINO-BASED UV-C DISINFECTING ROBOT USING PATH MEMORIZATION AND A* ALGORITHM

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ABSTRACT

Over the last two years, the number of people infected with the COVID-19 virus has increased at an alarming rate. The reason for the continuous increase in virus infections is that humans are the primary carriers of viruses and bacteria that are transmitted to other people. Many traditional disinfection processes and techniques have been developed to combat and reduce the presence of germs, viruses, and bacteria in an area and equipment. UVC is used to disinfect and clean surfaces that have been contaminated with germs and bacteria. The researchers created a disinfection robot for disinfecting institutional areas and equipment. The robot was designed to help reduce the risk of virus infection and aid the maintenance personnel in cleaning and disinfecting. UVC disinfection robot (ROBERT) is equipped with two 8W T5 LED Germicidal Lights mounted at the top of the robot platform, allowing for 360-degree disinfection. It also includes an Arduino Uno R3 board and a Motor drive shield, which is used to control all of the system's hardware components, functions, and features. These features include autonomous navigation, obstacle avoidance, and application-controlled disinfection. These features were designed to aid the institution's disinfection process. The researcher developed a system that provides risk-free and effective disinfection equipment to aid the maintenance personnel in their daily disinfection processes. This system automates the disinfecting process and utilizes UVC light technology.

Keywords: A* algorithm, Arduino-based, disinfecting robot, path memorization, UV-C

WORKING CAPITAL MANAGEMENT AND ITS EFFECT TO THE FINANCIAL PERFORMANCE OF LUISITO MEATSHOP

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ABSTRACT

Luisito's Meatshop was one of the microenterprise businesses located at Calamba Laguna. It offers a selection of meats that are imported for them by a big supplier. The purpose of this study was to determine how Working Capital Management (WCM) affects financial performance. The four divisions of the company's working capital management—Cash, Accounts Receivable, Accounts Payable Management, and Inventory —were examined. To ascertain the state of the company's working capital management, the study employed an adopted structured questionnaire with a Likert Scale. The business owner who handled and operated the business and its finances responds to the instrument. A financial ratio analysis was done in relation to its financial performance. Financial statements were created using the records that the business had on hand. The current state of its financial performance is also determined using industry standards. Industry averages were also utilized to know the current status of its financial performance. As the results conveyed, three out of four mechanisms of working capital management were properly observed. In the Cash Management section, accepting payment through checks turned out to be poorly observed. WCM in the Accounts Receivable Management section failed as they are not providing customers with credit terms, and are not tracking the records of accounts receivable. In addition, with their Inventory Management, they only sometimes update their inventory records with their daily sales. Despite these variations, the overall result for the current status of the Working Capital Management of the company was unaffected. In connection with that, the business's liquidity and profitability were both favorable. However, the efficiency of the company is not favorable or unfavorable. It is because the Cash Conversion Cycle, Accounts Receivable Turnover Ratio, and Accounts Receivable Turnover Ratio in Days of the company were unfavorable because of their poor management in Accounts Receivable. This imposed that working capital management directly affects liquidity and profitability. The recommendations of this study focused on the improvement of the company's collection processes, inventory management, and financial reporting.

Keywords: Working Capital Management, Financial Performance, Cash Management, Accounts Payable Management, Accounts Receivable Management, Inventory Management, Liquidity Ratio, Turnover Ratio, Profit

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