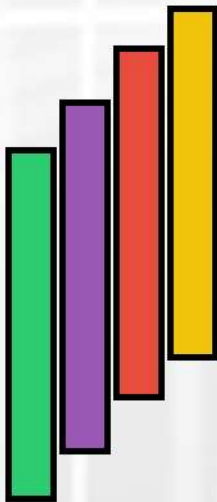


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Papers Presented	Page No.
Editorial Advisory Board Members and Regional Representatives	5
Editorial Board	6
ACCOUNTING AND TAXATION	
Accounting Card Games: Fun Learning for Accountancy, Business, and Management Students of General De Jesus College	18
<i>Francis Torres, Sheila De Guzman, Adrian Domingo, Laurence Marcel Calma, Ma Margreth Fedelino, Reena Lyka Gonzales, Madelyn Nicole Mirallo, Cathy Rivera</i>	
<u>BIOLOGICAL SCIENCES</u>	
The Antiparasitic Effect of Custard Apple (<i>Annona Squamosa</i>) Leaves on Cat Fleas (<i>Ctenocephalides Felis</i>)	20
<i>Angelo Navarro, Gabriel Salvador, Nicholas Brent Torres</i>	
Citrus maxima (Pomelo) Ethanolic Leaf Extract Termiticidal Activity Against Drywood Termites (Isoptera: Kalotermitidae)	21
<i>Clarisse Nika Dela Cruz, Reinne Danielle Sevilla, Richard Christopher Pangilinan, Lance Richard Flaminiano</i>	
Larvicidal Potential of Malunggay (<i>Moringa oleifera</i>) Root Extracts Against Mosquitoes	22
<i>Zylene Salas, Ryza Jane Sta Cruz, Anne Franchezka Ortiz, Jeehan Tignero</i>	
Antibacterial Activity of the Ethanolic Extract of Black Mulberry (<i>Morus nigra</i>) Fruit Against <i>Staphylococcus aureus</i>	23
<i>Kevin Andrew Rodriguez, Janine Rosalyn Miranda, Shanice Lyssa Yabotm, Aicelle Jeanette Mercado</i>	
Muntingia calabura Ethanolic Fruit Extract as an Alternative Antibacterial Agent Against <i>Staphylococcus aureus</i>	24
<i>Maria Lourdes Causon, Raquel Ann Liabor, Mark Andrew Magno, Gabriel Sebastian</i>	
<i>Capsicum frutescens</i> (Siling Labuyo) Ethanolic Extract as an Organic Alternative to Chemical Termiticides	25
<i>Winnie Lei Macaso, John Andrew Francisco, Franz Lorraine Balisi, Lianna Marie De Guzman,</i>	
Efficacy of Sambong (<i>Blumea balsamifera</i>) Leaves Extract as Mosquito Killer Spray	26
<i>Syrel Margarette Cunanan, Mhayella Clexandra Clemente, Rhea Jean De Jesus, Jodibhel Ann Zoe Torres</i>	
Phytochemical Properties and Antibacterial Activities of Calamansi (<i>Citrofortunella microcarpa</i>) Peel and Leaf Infusion	27
<i>Zaieree Berenice Yambao, Lana Margaret Tobias, Czairylle Santos</i>	
<u>BUILT ENVIRONMENT</u>	
The Utilization of Banana Bark as Material for Paper Bags	29
<i>Trina Causon, Sam Gabrielle Pabilona, Grecia Elinor Garcia, Jazzmine Rose Eleazar, Katrina Kate Torres, James Daniel Mallare, Maureen Chey Jose, Adam Jordison Castro, Jayceelyn Santos</i>	
<u>BUSINESS</u>	
The Advantages and Disadvantages of Having Small Businesses During Pandemic in San Isidro, Nueva Ecija	31
<i>Louezl Andrea Alonzo, Patricia Mae Aguilar, Jeraldine Lazaro, Francine Manalastas, Jean Aubrey Mendoza, Micah Ella Munsayac, Rebekah Joy Santos</i>	
Lived Experiences of Selected Senior High School Studentpreneurs	32
<i>Finella Vernice Castro, Mikaela Grace Corrales, Renz Alfred Lapuz, Abby Karrelle Gomez, Jen Erica Millado, Mary Angelique Mendoza</i>	

Challenges Encountered by the Selected Family Business Owners That Are Short-Staffed in San Isidro, Nueva Ecija <i>Samantha Khullin Interior, Loreinne Isabel Pajarillano, Shelvie Guinto, Jade Nicole Sahagon, Justin Emil Talens, Charles Darwin Villa</i>	33
Effectiveness of Social Media as a Marketing Tool for Advertising Small Businesses <i>Trisha Pauline Soriaga, Kim Airael Pangilinan, Janary Dimple Flores, Axl Marquez, Airish Mercado, Princes Ann Santiago, Irish Joy Javate</i>	34
Obstacles Faced by Selected Sole Proprietors in Their Small Business in San Isidro, Nueva Ecija <i>Paulene Garces, Letleth Interia, Kimverlie Joy Samin, John Reinier Caranay, John Kerby Caingat</i>	35
Levels of Motivation of the Selected Non-teaching Personnel of General de Jesus College and Its Effects on Their Work Performance: A Qualitative Study <i>Jemarita Espidol, Ivory Garcia, Lhei Franchette Ann Afuan, Marco Celo Nilo, Heaven Villarín, Cyrha Doinog</i>	36
Advantages and Disadvantages of Having a Business in Populated Location According to Business Owners at Public Market in San Isidro, Nueva Ecija <i>Joyce Diya Hernandez, Karylle Gutierrez, Marianne Jalova, Stephanie Shane Diaz, Hannah Regina Micu, Romeus Emil Novelles, Neil Andrei Constantino, John Andrei Cortez</i>	37
Social Media's Role as a Marketing Platform for Small Food and Beverage Businesses <i>Kalle Margarete Lardizabal, Aizem Santos, Catherine Joyce Constantino, Lance Cj Deliquiano, Tristan Santiago, Avril Denisse Pano</i>	38
Struggles of Selected Chicken Meat Vendors in Wet Market of San Isidro, Nueva Ecija in New Normal <i>Richelle Mallari, Stephanie Lyka Santiago, Ralph Andrew Magno, Rei Sie Maritoni Ortiz, Nicole Bondoc, John Race Parungao</i>	39
Banana Vinegar: An Alternative for Ordinary Vinegar <i>Anjelene Soriano, Faith Ahnn Villamayor, Karlvhi Yanga, Xyrus Jhon Jerry Vargas, Mikaella Silva, Kyle Valiente, Russel Tayag, Ken Razelle Viste, Francesca Dominique Rivera, Averell Zeus Tolentino</i>	40
Preference of Selected Grade 12 Students of General de Jesus College Towards Buying Foreign Brands <i>Nina Kylie Carillo, Alena Winona Gatchalian, Moses Eli Jose, Adrian Besorio, Sean Gil Benedict Talens, Shaine Louise Manalo</i>	41
Development of Multi-Purpose Scented Candle With Crushed Mussel Container <i>Marielle Cablao, Jeil Anne Marie Santos, Kevin Roxas, Gilrene Rose Escuadra, Lyka Marie Flores, Kathlene Zyrene Macapagal, Jherwinne Pajarillo, Micah Joy Sult</i>	42
Challenge and Strategies of Selected Ukay-Ukay Owners on Handling Their Clothes Stores in Gapan City, Nueva Ecija <i>Jana Lia Mariano, Krystal Anne Pablo, Daniella Libunao, Nathania Gwen Caoc, Ritz Christian Garcia, Ernest John Mendoza</i>	43
Knowledge and Understanding of Selected Senior High School Students of General de Jesus College on Misleading Advertisement <i>Dhafny Mendoza, Raizel Eana Sigua, Rose Camille Martinez, Allan John Aldea, Louise Angelique Matias, Kaye Katrina Martin</i>	44
The Struggles of Selected Small Food Cart Business in Restricted Public Zoning Area in Gapan City <i>Shanel Emas, Cj Pangilinan, Donrich Ferrer, Maria Elphie Franco, Miggy Ferrer</i>	45

Challenges Encountered by the Selected Small Carinderia Owners of Poblacion, San Isidro Nueva Ecija <i>Althea Lapuz, Elisha Joelle Estilo, Charlize Zoey Saclolo, Elaiza Santiago, Justine Retumalta, Jamille Galosa</i>	46
Development of Friendly, Aloe vera Unscented Paper Soap <i>Christine Beatrice Sonza, Ashley Lorraine De Guzman, John Kenneth Del Rosario, Marvin Reyes, Jeremy John Roque, Elicineth Bulanan, Rodalyn Garcia, Jmie Carol Maglaque, Allyza Jane Reyes</i>	47
Difficulties Encountered by Selected Sari-Sari Store Owners in Poblacion, San Isidro, Nueva Ecija <i>Kyla Louise Dizon, Ninnia Galvez, Diane Mae Mesina, Ivahnna Kate Causo, John Benedict Hernandez, Khent Jamir Villarosa</i>	48
A Phenomenological Study: Struggles of GJC Senior High School Student Part-Time Workers <i>Daphne Pangilinan, Divine Angel Santos, Ma Angelica Aurelio, Jillean Grace Gatuz, Mizzelle Joii Gonzales</i>	49
Difficulties Faced by Selected Small Restaurant Owners in Cabiao, Nueva Ecija in Using Digital Marketing <i>Mark Gabriel Soliman, Nyisha Alliyah Barlis, Collene Andrei Galang, Irish Nicole Librando, Justine Soneja, Arjun Lismith Singh</i>	50
Challenges of Selected Proprietors of Thrift Stores in San Isidro, Nueva Ecija in Using Social Media Marketing <i>Karylle Rose Villas, Trisha Mae Regala, Jarish Cheska Baluyot, Bianca Clarisse Tolentino, Mia Marcelo, Alonzo Sta Maria,</i>	51
Marketing Strategies of Selected Milk Tea Shops in Barangay Poblacion, San Isidro, Nueva Ecija <i>Archie Feliciano, Hansell Dela Cruz</i>	52
Strategic Management of the Selected Coffee Shop Owners at San Isidro and Cabiao, Nueva Ecija <i>Mary Josh Nicole Miranda, Althea Yvone Bangit, Claire Ann Gonzales, Chris Lawrence Patiag, Antoinette Myrrh Fernando, Avigail Tolentino</i>	53
Difficulties Faced by Selected Tattoo Artists in Their Chosen Profession in Jaen, San Isidro, and Gapan City, Nueva Ecija <i>Jazmin Mae Mercado, Larah Jane Beley, Maureen Mendoza, Francine Sambilay, Justine Anne Mapilis, Precious Rianne Pascual</i>	54
Striking a Balance Between Business and Studies: Lived Experiences of Senior High School Student-Entrepreneurs at General de Jesus College <i>Francine Bea Dela Cruz, Francine Cielo Joy Bautista, Eullene Rodessa Del Rosario, Chelsea Millisent Lores, Kristoffer Mangulabnan, Citadel Soriano</i>	55
Challenges Encountered and Its Effect on Business Operations of Coffee Shop Owners at Gapan, San Isidro, and Jaen <i>Kartlaenn Alexandra Barrera, Jasmin Mercy Salonga, Alexandra Busuego, Lextter Bauto, Reece Jyrel Marin, Erika Patricia Juatco</i>	56
Effective Strategies of Milk Tea Shop Owners of San Isidro Nueva Ecija for a Successful Business <i>Khrizel Ann Bud Oy, Jef Marcus Malgapo, Jazmine Joy Ortiz, Airlene Anne Sencilla, Heart Avelino, Jhan Ahmiel Talens,</i>	57
The Challenges Faced by Small Businesses Around San Isidro, Nueva Ecija During “The New Normal” <i>Venisse Yanga, Angel Villamayor, Joana May Pangilinan, Mariel Joannah Ramos, Danel Joshua Gomez, Erika Nicole Gabriel</i>	58

CHEMISTRY

Effectiveness of Using Potato Starch as a Plasticizer in Developing Bioplastic Films 61
Yeshua Jucanne Santos, Niña Mae Rizaldo, Aaron Paul Velayo, Jhon Dave Yanga, Kitharo Kenjie Amano, Keidene Maerol Lucas, Shairra Moira Pacson

Sodavin: Fire Extinguisher as a Substitute for Regular Fire Extinguisher 62
Jullieah Jaylyn Lapuz, Sophia Bianca Navarro, Joanna Mendoza, Jana Katrina Ocampo, Mark Joseph Jagon, Clarence Vito Lamson, Harvey Pablo, Jan Christopher King Parungao, Lorens Kim Joshua Segovia, Lorenz Andrei Soriano

CIVIL ENGINEERING

Utilizing Aggregates Materials of Expanded Polystyrene, Gravel, and Wood Sawdust in the Development of Bricks 64
J Saint Sibalon, Trisha Mae Ramos, Adrian Bautista, Christopher Dela Cruz, Royce Landon Aaron Sicat, Brandon Xavier Ladaban, Bill Enrik Caballa

Effectiveness of Waste Materials as Substitute for Aggregates in Making Concrete Hollow Blocks 65
Glen Andrei Manalo, Aaron John De Vera, Paulo De Guzman, Rick Jordan Damian

Effectiveness of Banana Leaf Ash and Coconut Fiber as Admixtures in Concrete Blocks 66
Benz Xylem Tabora, Eyron Odulio, Christian Calucin

Utilization of Bamboo Fibers and Bamboo Strips as an Additive Material in Making Concrete Hollow Blocks 67
Adrian Torres, Kenneth Dela Cruz, Althea Maxine Casino, Jhon Cedrick Quijano

Agricultural Waste as Substitute Mixture in Making Cement Hollow Blocks for More Sustainable-Built Environment 68
Vince Audric Guingon, Raeson Amir Reyes, Tyron James Lim

Utilization of Coconut Fibers and Aluminum Cans as an Admixture for Concrete 69
Christine Gantias, Kerwin Reyes, John Roger Marcos

The Effectiveness of Using Coconut Ash and Banana Fiber as Additional Components in the Durability of Hollow Blocks 70
Elyssa Marielle Quijano, Kathleen Rica Cruz, Rueben John Cantor, Jeremy Javier, Dennise Yvonne Cruz, Adrian Cloyd Odulio, Jade Jomher Dela Cruz

Transforming Waste Into Sustainable Building Material: Exploring the Potential of Agricultural and Paper-Based Fiber-Cement Ceiling Boards 71
John Hero Panahon, Sean Enrique Carreon, Jose Adrian Castillo, Jayvee Gonzales

The Effectiveness of Plastic Bottles as an Additive in Making Hollow Blocks 72
Diane Franco, Kylie Ortiz, Shamara Tiamson, Irish Lapuz, Czbastiane Ortiona, Sheena Parena, Aron Payabyab

Dried Mango Leaves (*Mangifera indica*): As Alternative Components for Particle Board (Plywood) Production 73
Shan Timothy Miranda, Angelo Custodio, Jhunel Balajadia, Krisha Mei Balao, Ashley Lasco, Llyana Shaine Sebastian, Keshley Galleta, Krizel Althea Francisco, Lucky Princess Pamilosa

CLIMATE SCIENCE

Purchasing Behavior and Intention of Selected Senior High School Students, in General de Jesus College Towards Eco-Friendly Products Through Their Packaging 75
Sophia Brienne Gallo, Emmanuel Joseph Santos, Sherra Fame Constantino, Risha Jane Punayo, Crisfen Ramos

COMPUTER SCIENCE AND ENGINEERING

JOJO: Adblocker: Blocking Unnecessary Advertisements for People Who Use Google Chrome 77
John Lawrence Josen, Ashley Lorenz Paras, Lerica Kate Trinidad, Amiel Ardee Aclan

Digitalization of Canteen System as a Solution to Crowd Congestion in In-Person Classes <i>Jose Ishmael Lapus, Joemar Lagat, Lei Alessandra Ortiz</i>	78
A Filipino Sign Language (FSL) Software: Conversion of FSL to Text and Speech Using Deep Learning <i>Alliza Joy Eser, Alexis Flores, John Cleven Vallarta</i>	79
A Cost-Effective 6-Key Wooden Braille Keyboard for Visually Impaired Individuals <i>John Lloyd Suarez, Danielle Joy Pueblo, Jamaica Pablita Padida, Justine Quilantang</i>	80
Developing a Web-App Expense Tracker System Using Simple Programming Languages <i>Jerson Angelo Bautista, Michael Charlie Pingol</i>	81
<u>DENTAL MEDICINE</u>	
Formulation and Antibacterial Activity of Calabash (<i>Crescentia cujete</i>) Leaves as Herbal Mouthwash Against <i>Staphylococcus aureus</i> <i>Katherine Gonzales, Theo Jonelle Nagayo, Sofia Nicole Guape</i>	83
<u>DEVELOPMENT STUDIES</u>	
Handmade Customized Crochet Cover of Aqua Flask Water Container <i>Mark Ryan Bautista, Ara May Lucena, Jaemiel Fernandez, Lorelane Chiuco, Zandra Mariel Villareal, Clarisse Santos, Lyndsay Ann Gwyneth Pablo, Huie Rylle Jose, Alyster Luis Czar Sarmiento</i>	85
Development of Papaya and Calamansi Soap for Sensitive Skins <i>Hazel Ann Joy Medina, Reggie Mar Cruz, Jayson Peret, Lorraine Balingit, Andrea Arabella Dacia, Lorie Jane Jimenez, Jennielyn Magtibay, Kyla Santiago, Ryza Sitchon</i>	86
<u>ECOLOGY AND ENVIRONMENTAL STUDIES</u>	
The Feasibility of Kulitis (<i>Amaranth</i>) Leaves as a Bioplastic <i>Edson Quijano, Jade Drazel Esguerra, Peniel Jhazeel Gulle, Alliyah Marquez, Angel Villar, Eric Lance Arquero, John Kervin Eugenio</i>	88
The Production of Bone Meal for Plant Growth and Development <i>Cielomae Althea Cucio, Divine Zcharelle Agudelo, Emanuela De Rueda, Kenny Michaela Xaula Caspillo, Juliana Jane Dela Cruz, Jhonas Bagan, Johnzel Callanga, Delmar Castro, Mikki Martin Agapito, Calvin John De Guzman</i>	89
Paper Production of <i>Musa acuminata</i> and <i>balbisian</i> (Saba) and its Effectiveness <i>Margarette Zoey Saclolo, Mica Shiekia Watabe, Robert Charles Eugenio, Ashley Nicole Campos, Krisy Gen Dela Cruz, Alyssa Janelle Lapitan, Lianne Puyat</i>	90
<u>ECONOMICS</u>	
Challenges Encountered by Selected Street Vendors in Poblacion, San Isidro, Nueva Ecija, Due to Inflation <i>Venice Althea Gonzales, Trisha Nina Yago, Monique Mendoza, Trisha Mercado, Gian Ray Elipane, Carl Ivan Sebastian</i>	92
<u>EDUCATION</u>	
Challenges Encountered by Selected Individuals with Disabilities in San Isidro, Nueva Ecija <i>Trisha Ann Uy, Shynelle Dela Cruz, Tanya Buenaventura, Iverson Lemence, Justine Francisco, Edrick Donaire</i>	94
Digital Age: An Analysis of the Influence of Ict in Humanities and Social Sciences (HUMSS) Strand to Grade II and I2 HUMSS Students in General de Jesus College <i>Irish Tan, Mark Lander Mangilit, Angeline Catalan, John Carlo Fernando, Nigel Kent Ovilla, Benj Patrick Ramos</i>	95
A Phenomenological Study on Challenges Encountered by Selected Grade II HUMSS Students at General de Jesus College Due to Absenteeism <i>Mariz Aliana Dayao, Julius Lapuz, Marc Joshua Cervantes, Crystal Jade Avenido, Markey Mallare, Aaron Clyde Miranda</i>	96

Expenditure and Frugality: Allocation of Diurnal Allowance of Senior High School Students in General de Jesus College <i>Dana Marie Almario, Ma. Editha Lopez, Lorenz Eduard Tangan, Lieca Nicole Mangilit, John Paul Miranda</i>	97
Development of Natural Eco-Friendly Lip Balm <i>Reign Azzel Mendoza, Jessa Mae Pascual, Stephanie Manlapaz, Shane Rose Santiago, Jeremy Pablo, Coleen Joice Limbo, Jerald Bernabe, John Aries Valencia, Nicole Corbilla</i>	98
Challenges Encountered by Selected Grade 11 GAS Students of General de Jesus College in Blended Learning and Its Impact on Their Academic Performance <i>Jhaniena Mendoza, Danier Luis Dimaano, Renzo Barutu, Alexander Tuibeo, Achilles Gonzales</i>	99
Academic Weight Caseload: An Evaluation of Its Effects on the Sleeping Patterns of Senior High School Students in General de Jesus College <i>Eliziah Balagtas, Axel Iverson Antonino, Judd Axel Wycoco, Lea Samantha Roxas, Jervy Soneja</i>	100
Knowledge and Understanding of Senior High School Students of General de Jesus College on Sexuality Education <i>Roshen Anne Gonzales, Mariane Villas, Jianne Lorraine Dela Cruz, Margaret Abby Fuertes, Elcid Castillo</i>	101
Factors Affecting the Career Choices of Selected Grade 12 Students in General de Jesus College <i>Jarvee Astudillo, Brent Andrei Antonino, Jhearleshie Coleen Centeno, Lawrence Estrella</i>	102
Lived Experiences of Selected Grade 11 Students at General de Jesus College Who Grew Up Without the Presence of Their Biological Parents <i>Hershey Rain Pineda, Irish Louise Galang, Jospet Alfanta, Renz Danielle Magtalas, Ann Daniella Gonzales, Justine Villafuerte</i>	103
Struggles of Selected Grade 11 Students at General de Jesus College Due to Academic Stress and Pressure that Affects their Scholastic Performance <i>Lara Sophia Verde, Asstel Jolle Yago, Mariella Ann Calimlim, Jilliane Reyes, Breanna Jamela Lhei Emas, Jag Gatchalian</i>	104
Self Perception of ABM Students' in General de Jesus College Towards Their Academic, Social, and Emotional College Preparedness <i>Ryza Nicole Lapuz, Bernadette Joyce Duque, Aaron Erich Canon, Ryza Gokesan, Vea Mica Sicat, Lance Gabrielle Mallari, Rhenz Xyron Eleazar</i>	105
Rice and Cassava Flour: An Edible Alternative to Plastic and Paper Straws <i>Rhap Vincent Lapuz, Shawn Dwayne Viseus Dela Cruz, Marc Kent Villasenor, Angel Cuenco, Ginela Victoria Garcia, Katrice Jalova, Princess Janary Munsayac, Cyrene Pelayo</i>	106
Academic Stress and Their Impact on Students' Depression Level and Academic Performance <i>Justine Rhey Rasdas, Angle Zachary Aquilizan, Beatrice De Guzman, Chelsea Ortiz, Khen Pangilinan</i>	107
Factors Affecting the Procrastination Habits of Senior High School Students in General de Jesus College and Their Impacts on Their Physical and Mental Well-Being <i>Rhea Pascual, Angel Shaine Santos, Lorenz Alas, Justine Mina, Ryjenn Lance Ortiz, Zhane Maedilene Mangilit</i>	108
The Link Between Social Media and the Fear of Missing Out of Senior High School Students of General de Jesus College <i>Aaron John Candaba, Lei Andrei Capili, Ralph Josef Centeno, Euvilla Ortiz, Maria Alyssa Vergara, Patricia Linsangan</i>	109
Academic Difficulties Encountered by Second-Year Accountancy Students in General de Jesus College School Year 2022-2023 <i>Elise Joy Angeles, Darren Bautista, Johnlloyd Capinpin, Mariel Horlina, Jonalyn Velasco</i>	110

The Impact of Social Media Usage on Effective Communication Skills of Senior High School Students	111
<i>Angeline Cabiling, Sean Andrei Mina, Ken Russel De Guzman, Liandsey Pangilinan, Kenjie Renz Guinto, Tristan John Santos</i>	
<u>ENGINEERING</u>	
Production of Pelton Water Turbine Generator Using Recycled Materials	113
<i>Roaj Siemil Gutierrez, Sho Sta Maria, Christian Bauto, Daniel Kyle Maniquiz</i>	
Killing Watts Using Smart Watt Meter	114
<i>Eldrick Josh Lazarte, Aldric Raymond Paul Santos, Angelo Velarde, John Rhed Babayson,</i>	
The Effectiveness of High-Pressured Water-Powered Generator as a Supplementary Source of Electricity	115
<i>Faye Marriel Magno, Janna Mae Sicat, Lyle Nathan Patiag, Maria Angeline Madiz, Roxanne Zabat, Rodge Aeron Morales</i>	
Efficiency of the Alternative Hydroelectric Generator in Irrigation	116
<i>Marian Pangilinan, Mclin Javier, Louise Ariana Aguilar, Harvey De Leon</i>	
Performance of a Modified Grill Thermoelectric Generator With Iced-Based ‘Samalamig’ Cooling System	116
<i>Vince Pelayo, Justin Dizon, Aldwin Lopez</i>	
Design and Development of the Use of Solar Panels With a Dual-Axis Sunlight Tracking System for Improved Solar Energy Harvesting	117
<i>Rina Chesna Yambao, Sarah Marie Reyes, Reginald Salvador, Paolina Francheska Gaddi</i>	
<u>ENVIRONMENTAL HEALTH</u>	
The Effectiveness of the Mosquito Repellent Hand Sanitizer	119
<i>Siatzy Dela Cruz, Jerwin Dollesin, Vaness De Guzman, Althea Delos Santos, Jayronn Abad Santos, Gio Gajasan</i>	
The Effectiveness of Using Thyme, Rosemary, and Oregano as a Perfume Repellent Spray	120
<i>Janica Ramos, Marvellou Cabling, John Michael De Luna, Dheystynie De Vera, Darius Francisco Jr, Aubrey De Guzman, John Robi Francisco</i>	
The Effectivity of Using Coconut Coir and Banana Stem (Pseudostem) as a Paper Bag	121
<i>Ma Danica Mielle Magno, Angel Constantino, Jade Anne Ramirez, Patrick Buenaventura, Justin Fajardo, Mark Jimuel Imbag</i>	
<u>FINANCE</u>	
Spending Behavior of Selected ABM Senior High School Students in General de Jesus College	123
<i>Nikka Alexis Barlis, Maxenne Santiago, Jerome Ashley Ruanes, Erika Mae Francisco, Chariz Dela Cruz, Kimberly Dela Cruz</i>	
Financial Management Practices of Selected Sari-Sari Stores in San Isidro, Nueva Ecija.	124
<i>Charles Francisco, Allysa Salcedo, Isabella Louise Lazaro, Bryan Bondoc, Rhea Mae Mangaliman, Ivy Gail Javier</i>	
<u>FOOD SCIENCE AND ENGINEERING</u>	
Goosegrass Flour: An Alternative for Wheat Flour	126
<i>Hazel Lean Escobido, John Henryck Garces, Marielle Nicole Garcia, Angel Sam Francisco, Angeline Embuscado, Beatrice Domincel, John Feliciano, Katherine Eleazar, Edison Ignacio Christian, Gabriel Donaire</i>	
The Effects of a Tea Made With Black Tea Leaves (<i>Camellia sinensis</i>), Hibiscus Flower (<i>Hibiscus sabdariffa</i>), Cardamom (<i>Elettaria cardamomum</i>), Camu-Camu (<i>Myrciaria dubia</i>), Chlorella (<i>Chlorella pyrenoidosa</i>)	127
<i>Jade Lorenz Dionisio, Mayer Yelle Galvez, Jule Emmanuel Soriaga, Mark Kenneth Mendoza, Mico Aaron Tadeo, Kurt Louie Mallari</i>	

HEALTH SCIENCES

Effectiveness of Shampoo Made With Musa (Banana), Fragaria x ananassa (Strawberry), and Citrus limon(Lemon) To Prevent Dandruff and Itchy Scalp 129
Roxanne Agravante, Ryza Sebastian, John Andrei Custodio, Jake Denver Esguerra, Jheuann Jedrich Jaramilla, King Ivan Rafael, Jeslie Clarisse Tibus

All-Natural Facial Wash: Aloe vera, Calamansi, and Basil 130
Charles Gabriel Dela Rosa, Sharmaine Joy Centeno, Yannah Pauline Cales, Joseph Scott Bundoc, Sharkhee Lagman, Alyza Frances Ele, Ma Donalin Kyla Sebastian, Ian Darrell Paras

Effectiveness of Lavender, Hibiscus, and Tea Tree as Soap Tick Repellent 131
Jenna Buenaventura, Marviel Kasandra Marie Pioco, Micah Marie Inoncillo, Benz Arvin Dela Cruz, Maverick Ivan Callison, Kerwin Trielle Empaynado, Nathaniel Ivan Lapuz

LEGISLATION

Depletion of Privilege: College Students' Stance of General de Jesus College on Third-Sex Marriage Legalization 133
Kenzilu Malgapo, Jean Carla Nerit, Crizel Fuertez, Ritchie Torres, Janice Pacheco

MARKETING

Marketing Strategies of Selected Clothing Business Owners in Gapan City 135
Glenn Aicelle Vicencio, Hanna Mae Magtuto, Jeane Kelly Mina, Trina Mae Gonzales, Christian Cristobal, Nina Ricci Palma

The Phenomenological Study of San Isidro's Beverages Managers Who Use Digital Marketing 136
Raven Anne Corpuz, Dyca Francel Cardenas, Zyrille Penales, Ryca Angela Baldorado, Mhaegan Wynne Tuazon, Ashley Nicole Cagunon

The Power of Social Media Influencers Among the Senior High School Students at General de Jesus College 137
Marithea Dayao, Ashley Tan Loraine, Joy Azarcon, Avelino Cabungcal, Renz Fernando, Zedrick Juan

Facebook as a Digital Marketing Strategy Among General de Jesus Senior High School Online Sellers 138
Sophia Micor, Ashton Kirby Reyes, Irene Mercedes Leyva, Patricia Nicole Atang, Aiseen Fei Basa, Keith Gailyn Sulit

Effectiveness of Social Media as Marketing Tool in Gapan City, Nueva Ecija 139
Sofia Nicole Fenix, Leslie Ann Mallari, John Leonard Jemilla, Karol Josef Umali, Crystal Ann Mina, Kim Charlotte Espinoza

MECHANICAL ENGINEERING

Development and Performance Assessment of a Pedal-Powered Generator for Bicycles as an Alternative Energy Source for Charging Devices. 141
Frank Eliel Gasta, Keith Dranoel Garcia, Dillian Gabriel Andrada, Charles Andre Sobremonte

MEDICAL EDUCATION

Effectiveness of Chaga Mushroom (Inonotus obliquus) With Roasted Japanese Rice Grain as Herbal Tea 143
Bianca Dela Cruz, Faye Samantha Martin, Lei Kyrsten Apolinario, Stephanie Pascual, Mabigael Angelica Basco, John Marcos Teddy IV Galang

Effectiveness of Natural Antacid as an Alternative for Over-The-Counter Tablets 144
Sophia Angelica Gloria, Elaine Bernadette Lacsina, Alyssa Mangulabnan, Angelic Rovian Lapitan, Jamaeca Bien Sulit, Faith Samson

- The Effectiveness of Using Selected Organic Spice and Pomelo Peel Extract as an Insecticide 145
Princess Leah Andaya, Alexa Lauren Arenas, Raphael Eduardo, Ahleabel Nei Miranda, Laura Azhlee Ortiz Luis, Leigh Anne Ashley Vicencio, Nigel Rey Villamayor
- MEDICINE**
- Calamansi (*Citrofortunella microcarpa*) Leaf Extract as a Wound Healing Booster 147
Karla Catalan, Aldrei Abillon, Rudyline Miles De Belen, Candyd Fritzie Egos
- In-Vitro Antibacterial Effect of Ethanolic Leaf Extract of Betel Palm Tree (*Areca catechu*) Against *Staphylococcus aureus* 148
Darich Jake Mangulabnan, Ashley Mendoza, Ghislaine Mangulabnan, Beatrice Balagtas
- Effectiveness of Using Calendula and Aloe vera Ointment in Treating Minor Injuries 149
Yuri Reyes, Julian Buenaventura, Asaph Estanislao, Jose Carillo, Samantha Chiu, Andrei Nuguid, Rex Santos
- Wound Healing Effects of *Hylocereus polyrhizus* Stem Extract Ointment on Second-Degree Superficial Burned Albino Mice 150
Julienne Mher San Gabriel, Carlos Dylan Ramos, Leila Javier, Ellaine Kristine Pallarca
- Antibacterial Activity of Pumpkin (*Cucurbita maxima*) Fibrous Strands Ethanolic Extract Against *Escherichia coli* 151
Samantha Gagni, Lira Dela Cruz, Lyka Abegail Magno, Jastine Manalastas
- Phytochemical Properties and Antibacterial Activities of the Ethanolic Extract of Papaya (*Carica papaya*) Leaves 152
Jhoanna Nicole Garcia, Jen Marie Macabante, Althea Mae Padua, Lean Pattie Tobias
- MENTAL HEALTH**
- Lived Experiences of Selected Grade 11 Students of General de Jesus College Who Were Bullied at School 154
Princess Apple Pablo, Gabriel Tolentino, Daniel Tamayo, Myla Dela Cruz, Richmond Ocampo, John Lloyd De Leo
- Coping Mechanisms of Senior High School Students in General de Jesus College on the Impact of Pandemic Towards Their Well-Being 155
Zyrelle Cuenca, Aaron Tomm Constantino, Melissa Jade Munsayac, Jethro Miguel Manuel, Pia Mangalus
- PHARMACOLOGY AND PHARMACEUTICAL MEDICINE**
- Antifungal Efficacy of Soap Containing Lagundi Extract (*Vitex negundo*), Aloe vera (*Aloe barbadensis* Miller), Garlic (*Allium sativum*), and Philippine Lime (*Citrus microcarpa*) through Lab Testing 157
Vincent Bob Arcilla, Joshua Junia, John Aaron Mercado, Sean Kian Cabrito, Jann Michael Jaraba, Wiljanh De Belen, Ronnel Francisco
- PSYCHOLOGY**
- Lived Experiences of Selected Senior High School Students of General de Jesus College in Seeking Academic Validation 159
Lara Alyssa Flores, Cyrille Mae Arquero, Cesiah Jemima Garcia, Pauleen Matias, Erika Joy Pablo, Justine Pajarillo, Angelica Rose Ramos
- Impact of Social Media Exposure on Mental Health of Selected Grade 11/12 Senior High School Students of General de Jesus College 160
Joemari Sabino, Lorraine Sevilla, Dianelle Lyra Sayo, Kenneth Cuevo, Joseph Emmanuel Pascual, Pacifico Garces III, Winnie Ramirez
- The Effects of Aromatherapy Fidget Cube on Stress Reduction: A Study of Blue Ternate Oil Diffused as an Additional Feature to Fidget Cube 161
Julian Andrew Galang, Andrea Nicole Dolor, Zhantie Gaile Guevarra

PUBLIC HEALTH AND COMMUNITY MEDICINE

The Efficacy of Lemongrass (*Cymbopogon citratus*) Extract and Oregano (*Origanum vulgare*) Extract as Plant-Based Mosquito Repellent Oil for Diffuser 163
Loraine Erica Tolentino, Ais Omega Martin, Christian Leonard Mendoza II, Andrei Guzman

The Effectiveness of Atis (*Annona squamosa*) Leaves Extract as a Spray Repellent to Mosquito 164
Geryna Yddet Domingo, Diana Rose Lagutan, Eloisa Mariel Ramirez, Jhanella Constantino

Awareness of the Selected Grade 12 Students in Their Rights and Protection in Online Shopping 166
Lesley Manalo, Airish Mae Tobias, Rustom Arguelles, Elaine Roque, Sheine Margarete Santos, Cheska Abelardo

RISK AND SAFETY SCIENCE

Experiences of Selected Grade 11 Students of General de Jesus College as Public Commuters 168
Krizlin Pangilinan, Jana Nicole, Angelo Julia Del Rosario, Anne Nathalie Ortiz, Jan Jarlaine Balondo, Trisha Ortega

SOCIAL SCIENCES

Battling Colorism: Struggles of Selected Senior High Students in General de Jesus College With Skin Tone Bias 169
Zyrylle Tolentino, Furat Al Sari, Klarise Alvarez, Jessica Cape, R Yanna Dela Cruz, John Lloyd Sta Cruz

Lived Experiences of Selected Junior High School Students of General de Jesus College Struggling Due to Parental Pressure 170
Jenina Reese Faderog, Almira Joyce Garcia, Audrey Suzzane Mabagos, Ma Kriztine Dhenielle Valdez, Venice Irish Balagtas, Mia Divina Fritzie Zseth Capistrano

WOMEN AND GENDER STUDIES

Gender Stereotyping: Impact on Senior High School Students' Behavior and Academic Performance at General de Jesus College 172
Marimel Cunanan, Kathrine Villamayor, Kryzia Mikaela Barleso, Cristine Joyce Bernabe, Floyd Conrad Paz, Crizia Lei Cobarrubia

Challenges of Female Senior High School Student Council Officers in General de Jesus College 173
Eunice Madrigo, Jasmine Malonzo, Arvi Marcos, John Francis Bautista, Nico Magno, John Lester Primo

Challenges Faced by Selected Grade 11 LGBTQ Students in General de Jesus College 174
Irish Joyce Buenavente, Justin Philip Franco, Ralph Daniel Torres, Juliana Ruby Balajadia, Justine Kharl Viste, Carl Wilson Closa

ACCOUNTING AND TAXATION

Accounting Card Games: Fun Learning for Accountancy, Business, and Management Students of
General De Jesus College

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Accounting is a crucial aspect of any business; students and professionals must understand the concepts and principles involved. However, learning to account can be challenging, and traditional teaching methods may not always be practical. Therefore, this research aims to propose the development of accounting card games that can enhance the learning experience and improve the understanding of accounting principles. This study employed a quantitative research design, particularly descriptive-developmental, to determine the need for accounting card games among senior high school students enrolled in the Accountancy, Business, and Management (ABM) strand at General de Jesus College. Slovin's formula was used to determine the sample size, and data gathering involved two questionnaires - an evaluation tool and a needs assessment questionnaire administered via Google form. The proposed accounting card games were developed in three stages, and statistical treatment involved frequency count and percentage analysis. This study examined the challenges faced by students in the ABM strand when studying accounting subjects and their openness to new learning methods. The findings indicate that many students find accounting subjects challenging. However, some students did not experience difficulty. Most respondents are open to new learning methods and suggest using card games to learn accounting subjects. Respondents find them more engaging and interactive than traditional methods. These findings can guide the development of effective teaching strategies for accounting subjects. The study further highlighted the need to develop accounting card games as a gamified learning tool to improve student's learning outcomes. The proposed games aim to provide a positive and engaging learning environment that fosters peer interaction and enhances students' learning experiences.

Keywords accounting card games, gamified, ABM

Accounting and Taxation

BIOLOGICAL SCIENCES

The Antiparasitic Effect of Custard Apple (*Annona squamosa*) Leaves on Cat Fleas
(*Ctenocephalides felis*)

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Fleas are a disease-spreading parasitic insect, of which *C. felis* is the most widespread species. Many flea control methods exist, with synthetic parasiticides being the dominant response to flea infestations. As a consequence, ecological and human safety issues arise. To lessen the dependence on synthetic parasiticides, this study examines *A. squamosa* leaf extract as a botanical parasiticide for its well-documented antiparasitic activity. This study employed an authentic experimental research design using treatments with different concentrations of ethanolic *A. squamosa* leaf extract. Fleas were exposed to the leaf extract in test tubes. Rates of mortality and sedation were observed along with the time intervals of specimen death.

Regarding flea mortality and speed of the effect, the highest leaf extract concentration proved to be the most effective. The lower concentrations sedated the more fleas, as higher concentrations killed them too soon for sedation. Compared to commercially available flea spray, the highest leaf extract concentration yielded similar results. The findings of this study indicate that *A. squamosa* leaves can be used to treat flea infestations. A higher concentration of the leaf extract produces higher effectiveness in killing fleas. Parasiticide manufacturers may use this study as a basis to develop new products. Future researchers may test different methods, species, and dosages to contribute to understanding the antiparasitic properties of *A. squamosa* leaves.

Keywords: *Annona squamosa*, *Ctenocephalides felis*, antiparasitic, efficacy

Biological sciences

Citrus maxima (Pomelo) Ethanolic Leaf Extract Termiticidal Activity Against Drywood Termites (Isoptera: Kalotermitidae)

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Due to the tropical climate of the Philippines, dry wood termites thrive in the environment, causing structural damage to homes and buildings. As a result, synthetic termiticides are widely used to combat these pests. However, it has been discovered that they harm humans and the environment. For these reasons, the researchers aimed to investigate the efficacy of an organic termiticide derived from Pomelo leaves, which could serve as an alternative and be used in efficient termite control. In this study, experimental research was used. A total of 150 dry wood termites were collected to test 5 groups of samples: 3 different concentrations of extract (25%, 50%, and 75%) and two controls: one positive (Leadrex) and one harmful (water). The effectiveness of the Pomelo leaf extract was tested by spraying the extract on the termites and observing them for 30 minutes. The basis for this experimental study was the number of dead termites and the time it took to eliminate them.

Percentage of mortality and Analysis of Variance (One-Way ANOVA) was utilized as the study's statistical treatment. The Pomelo leaf extract's three concentration levels (25%, 50%, and 75%) all showed significant termiticidal activity against dry wood termites across three testing trials. The 25% concentration level recorded an efficacy rate of 26.67%, while the 50% concentration had a 53.33% efficacy rate. Both recorded an average time of efficacy of 30 minutes. Meanwhile, the 75% concentration recorded a 100% efficacy rate with an average time efficacy of 5 minutes and 50 seconds, significantly faster than the positive control, which recorded a 100% efficacy rate in 7 minutes and 34 seconds. The result shows that Pomelo (*Citrus maxima*) demonstrated termiticidal activity against dry wood termites. Higher extract concentrations were more effective than the lower concentrations (25% and 50%). Synthetic termiticide (Leadrex) and Pomelo-based termiticide are both effective. However, the 75% concentration of Pomelo leaf extract was faster by 1 minute and 44 seconds.

Pomelo (*Citrus maxima*), Drywood Termites, Termiticide

Biological sciences

Larvicidal Potential of Malunggay (*Moringa oleifera*) Root Extracts Against Mosquitoes

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Vector-borne diseases remain one of the most prevalent issues regarding global health. As a result, control programs have been implemented utilizing mosquito control agents, specifically larvicides. However, commercially available larvicides yield adverse effects on human health and the environment, thus calling for the development of novel and safer alternatives. This study aims to assess the larvicidal potential of Malunggay (*Moringa oleifera*) root extracts as a possible bio-larvicide. An experimental design was utilized. A larvicidal bioassay was conducted wherein Malunggay root extracts were tested for larvicidal activity at the following concentrations: 100%, 75%, 50%, and 25%, against standard laboratory-reared mosquitoes of the 4th instar stage. Each concentration was added to separate 100 mL beakers with exposed water containing ten larvae. The mortality counts for each treatment of 4 replications were observed and tallied for 24 hours. The mortality data were subjected to probit analysis to determine the larvicidal activity of each concentration. The Malunggay root extracts displayed an overall moderate larvicidal activity under three hours. The extract at 100% concentration yielded the highest mortality rate at 9.8% out of 10%, the 75% concentration yielded 8.0%, while both 50% and 25% displayed no larvicidal activity. The results demonstrate a dose-dependent relationship, with concentration playing a crucial role in the effectiveness of larvicidal treatments. The commercially available larvicide and the 100% extract of Malunggay roots demonstrate comparable larvicidal activity, indicating the potential of Malunggay roots as a bio-larvicidal alternative. Thus, conducting additional experiments, toxicity studies, field trials, and application of different formulations are recommended to pursue these results further.

Keywords: Larvicide, Larvicidal, Larvicidal Potential, Malunggay, *Moringa oleifera*, Mosquitoes

Biological sciences

Antibacterial Activity of the Ethanolic Extract of Black Mulberry (*Morus nigra*) Fruit Against *Staphylococcus aureus*

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Plants are valuable sources of biologically active chemicals, particularly phenolic compounds with strong antibacterial properties. *Morus nigra*, commonly known as Black Mulberry, is one such plant that possesses a high total phenolic compound level and has antioxidant and antibacterial activities. Thus, this research aimed to identify the antibacterial activity of the Black Mulberry (*Morus nigra*) fruit and created an extract that can be used as an antibacterial against *Staphylococcus Aureus*. This study used an experimental method to determine the antibacterial activity of the ethanolic extract of the Black Mulberry (*Morus nigra*) against *Staphylococcus Aureus*. The agar diffusion method was used to determine the zone of inhibition of bacterial growth to determine the resistance or the susceptibility of the pathogen created by the extract. The Antimicrobial Index formula was used by the researchers to statistically analyze the ethanolic extract of Black Mulberry (*Morus nigra*) fruit and commercially available products. The result showed antimicrobial activity against *Staphylococcus Aureus* with an Antimicrobial Index (AI) of 0.6, and the diameter of inhibition zones was 16,14, and 17 millimeters for the Ethanolic Extract of Black Mulberry (*Morus Nigra*) Fruit.

Furthermore, the sample showed that the commercially available product (Chloramphenicol) with an AI of 4.0 and diameter inhibition zones was 30 millimeters is partially more efficient in inhibiting the growth of *Staphylococcus Aureus* than the ethanolic extract of Black Mulberry (*Morus Nigra*) fruit. The results showed that the Ethanolic extract of Black Mulberry (*Morus Nigra*) fruit was found to have an antimicrobial effect on *Staphylococcus Aureus* with an Antimicrobial Index (AI) of 0.6. The sample exhibited the largest zone of inhibition with 17mm concluding that the efficacy was Intermediate. Additionally, efficacy was significantly different between the commercialized medicine (Chloramphenicol) and the formulated concentration (Black mulberry fruit extract).

Keywords: Antibacterial, Black Mulberry Fruit, Efficacy

Biological sciences

Muntingia calabura Ethanollic Fruit Extract as an Alternative Antibacterial Agent Against Staphylococcus aureus

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Many medical researchers have scientifically proven that Muntingia Calabura possesses various antimicrobial and anti-inflammatory properties through its leaves, stem, and roots that were used a lot in past studies and are proven effective against pathogens such as Staphylococcus Aureus. Still, the fruit has not been studied yet. In this paper, we aim to prove that the ethanolic fruit extract of Muntingia Calabura is efficient and can be utilized as an antibacterial agent against Staphylococcus Aureus. The experimental method, a type of quantitative research, was the design used in this study. The 80g of Muntingia calabura were sun-dried until crisps, then pulverized and soaked to 480 ml ethanol. The extract was filtered using Whatman filter paper after 36 hours and rotary evaporated afterward. The disc diffusion method was used to test the efficacy of M. calabura fruit extract against Staphylococcus aureus. The study's results showed that the ethanolic fruit extract of Muntingia Calabura (also known as Saresa) had demonstrated antimicrobial activity against Staphylococcus Aureus, with an antimicrobial index of 0.8 and 18mm zone of inhibition. However, it is clear from the research that Chloramphenicol, a commercially available antibacterial drug, is more effective in reducing the growth of Staphylococcus Aureus than the ethanolic extract of Muntingia Calabura. The results show sufficient evidence through analysis and careful interpretation that the Muntingia Calabura efficiently reduces the growth of Staphylococcus Aureus.

Keywords: Muntingia Calabura, Staphylococcus Aureus, Antibacterial

Biological sciences

Capsicum frutescens (Siling Labuyo) Ethanolic Extract as an Organic Alternative to Chemical Termiticides

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As highlighted by Evans et al. (2013), termites pose a significant threat to plants and infrastructure. The economic costs incurred due to termite damage and prevention measures reach billions of dollars annually globally. Chemical control has been effective in preventing termites. However, it raises concerns due to its harmful effects on human health and the environment, as it is highly toxic and poses acute risks, as Rani et al. (2020) stated. To address these concerns, researchers conducted an experimental study using an organic alternative: fruit extract from *Capsicum frutescens*. An experimental research design was used in this study. The various concentrations of Siling labuyo (*Capsicum Frutescens*) ethanolic extract, ranging from 10–50%, were tested against dry wood termites. Three replicates were assessed, and Orsus Termite X was used as a positive control in all trials. Mortality was recorded at 2-minute and 4-minute time intervals. Live and dead dry wood termites were counted, and percent mortality was calculated using the Abbott equation. At 2 minutes of exposure, the various concentrations of Siling labuyo (*Capsicum frutescens*) ethanolic extract from 10-50% obtained 56.7%, 63.3%, 70%, 83.3%, and 83.3% mortality rates, respectively. At 4 minutes of time exposure, the resulting mortality rates are 56.7%, 66.7%, 76.7%, 83.3%, and 86.7%, respectively. Results showed that Termite X obtained a mortality rate of 93.3% at 2 and 4 minutes of time exposure compared to 83.3% and 86.7% mortality rates for the 50% concentration of the extract at 2 and 4 minutes of time exposure, respectively. Therefore, it is more effective than the organic termiticide produced from chili peppers. The results of the study revealed that the treated formed concentrations, from highest to lowest, had considerable effectiveness and produced a respectable mortality percentage as termiticides. This led researchers to conclude that termites can be killed by an ethanolic extract of the Siling labuyo (*Capsicum frutescens*) fruit. However, the study signifies that the chemical termiticide (Termite X) has demonstrated greater efficacy than the ethanolic extract of the organic termiticides made from the fruit of Siling labuyo (*Capsicum frutescens*).

Keywords: termiticides, *Capsicum frutescens*, dry wood termites, efficacy

Biological sciences

Efficacy of Sambong (*Blumea balsamifera*) Leaves Extract as Mosquito Killer Spray

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The use of synthetic chemicals in controlling vector mosquitoes is now causing health problems for the public, and mosquitoes are becoming more resistant to these substances, prompting researchers to look for safer, healthier, and environmentally-friendlier alternatives. In this study, the researchers developed a plant-based mosquito killer spray made from Sambong (*Blumea balsamifera*) leaves extract, which is more affordable and accessible. The design used in the study was the experimental method which helped to determine the efficacy of the plant-based mosquito spray in different concentrations (IV) by the number of dead adult mosquitoes (DV). An ethanol extraction was used to obtain the Sambong leaves extract. The number of mosquitoes killed was observed for 30 minutes at concentrations of 100% (pure extract), 70%, and commercially available insecticides. The pure Sambong (*Blumea balsamifera*) leaf extract showed the fastest efficacy at killing mosquitoes, taking an average of 40 seconds.

Moreover, Sambong leaf extract had a faster time interval of death, with the pure extract being 1 to 7 seconds faster than commercial insecticide (Baygon). The results demonstrate the significant difference between the synthetic insecticide (Baygon) and formulated concentration (100% and 70%) of Sambong (*Blumea balsamifera*) leaves extract in terms of their efficacy in killing mosquitoes. The pure concentration (100%) of Sambong leaf extract exhibited the highest efficacy and the fastest time in eliminating adult mosquitoes compared to the concentration of 70% of the extract and commercially available product (Baygon). The study suggests that Sambong leaf extract can be an effective and safer alternative to chemical insecticides.

Keywords: Sambong, *Blumea Balsamifera*, Mosquito, Mosquito Killer Spray

Biological sciences

Phytochemical Properties and Antibacterial Activities of Calamansi (*Citrofortunella microcarpa*) Peel and Leaf Infusion

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Over the years, the use of disinfectants has significantly increased due to the rise of Covid 19 pandemic. This has led to the overuse of disinfectants that contain chemicals that endangers the environment. In this study, the researchers studied the phytochemical properties of Calamansi (*Citrofortunella microcarpa*) peel and leaf infusion and its antibacterial activity against *Staphylococcus aureus*. The experimental research design is appropriate for this study. As a result, the researchers conducted numerous tests, such as phytochemical analysis to determine the antibacterial components of the Calamansi (*Citrofortunella microcarpa*) peel and leaf infusion extract, and performing the disk diffusion method to ascertain whether the infusion can inhibit the growth of *Staphylococcus aureus*. The experimental research design is appropriate for this study. As a result, the researchers conducted numerous tests, such as phytochemical analysis to determine the antibacterial components of the Calamansi (*Citrofortunella microcarpa*) peel and leaf infusion extract, and performing the disk diffusion method to ascertain whether the infusion can inhibit the growth of *Staphylococcus aureus*. The disk diffusion test revealed that the Calamansi (*Citrofortunella microcarpa*) peel and leaf infusion could not inhibit the growth of *Staphylococcus aureus* with a zero-millimeter clearing zone. Based on the phytochemical analysis, the researchers concluded that antimicrobial elements were present in the Calamansi (*Citrofortunella microcarpa*) peel and leaf infusion. However, the amount of antibacterial components of the infusion was insufficient to inhibit the growth of *Staphylococcus aureus*. Furthermore, the commercially available disinfectant and the formulated concentration of Calamansi (*Citrofortunella microcarpa*) Peel and Leaf Infusion differed significantly in efficacy.

Keywords: Calamansi, Antibacterial, Infusion

Biotechnology & biomolecular sciences

BUILT ENVIRONMENT

The Utilization of Banana Bark as Material for Paper Bags

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Plastic waste is a major environmental issue worldwide, and disposable plastics significantly contribute to this problem. The retail sector is a primary consumer of single-use plastics, particularly plastic bags, which are commonly used. To address this issue, we researched to develop cost-effective and convenient alternatives that can effectively reduce the negative environmental impact of plastic waste. The banana paper bag is made from banana fibers as an eco-friendly replacement for plastic bags. Through random sampling and the distribution of surveys via Google Forms, we collected quantitative data from the target population for statistical analysis. The surveys employed descriptive developmental and cross-sectional approaches to gather information efficiently. With the answers provided by the respondents who participated in the survey, more than half of the respondents gave positive support for the need to develop a banana bark-based paper bag that could reduce the use of plastic bags and promote eco-friendly bags. In conclusion, creating the banana paper bag as a replacement for plastic bags is a crucial move in decreasing plastic waste and supporting sustainable practices in the retail sector. Utilizing banana fibers as the primary material for producing paper bags provides a feasible answer to the issue of plastic pollution and presents numerous benefits compared to conventional plastic bags.

Keywords: Banana Fibers, Banana Bark, eco-friendly, plastic bags, paper bags

Built environment

BUSINESS

The Advantages and Disadvantages of Having Small Businesses During Pandemic in San Isidro,
Nueva Ecija

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This research aims to provide a comprehensive analysis of the advantages and disadvantages faced by small businesses during the pandemic, highlighting the unique challenges and opportunities they encounter. This section explores the unprecedented challenges small businesses face due to the pandemic. It examines financial constraints, supply chain disruptions, reduced consumer demand, and mandated closures. Analyzing data and case studies sheds light on small businesses' unique vulnerabilities and their differential impact across industries and regions. This part explores small businesses' advantages, which can help them navigate through the pandemic successfully. It discusses their agility, flexibility, and ability to adapt quickly to changing circumstances.

Additionally, it examines how small businesses can leverage their strong community ties, personalized customer service, and innovative approaches to meet evolving consumer needs. This section highlights the various disadvantages faced by small businesses during the pandemic. It addresses issues such as limited financial resources, difficulty accessing government support programs, and challenges associated with implementing health and safety measures. It also explores the impact of reduced foot traffic, heightened competition, and the digital divide on small businesses. This final part proposes strategies and best practices for small businesses to overcome the disadvantages and capitalize on the advantages identified. It discusses approaches such as adopting e-commerce and online marketing, diversifying revenue streams, fostering partnerships and collaborations, and enhancing digital literacy. It also emphasizes the importance of leveraging government support programs, building resilience, and prioritizing employee well-being. This research provides valuable insights for policymakers, small business owners, and stakeholders. It contributes to the ongoing discourse on post-pandemic recovery, offering practical recommendations to support the resilience and growth of small businesses in the face of future challenges.

Keyword advantages and disadvantages, challenges, pandemic, small business.

Business

Lived Experiences of Selected Senior High School Studentpreneurs

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Entrepreneurship has gained significant recognition as a promising career path, with even students actively participating in it for its benefits and advantages. The presence of studentpreneurs is vital for economic growth and job opportunities, but they encounter obstacles, difficulties, and complications in managing their business ventures. Despite the growing number of student entrepreneurs, there is still limited research on their lived experiences. This study aims to know studentpreneurs' challenges when managing their business as they balance the demands of school and entrepreneurship. To achieve the study's objectives, a qualitative research design was adopted using a phenomenological approach. Data were gathered through in-depth interviews with ten senior high school studentpreneurs from General De Jesus Colleges. The participants were selected using purposive sampling based on their level of entrepreneurship involvement and willingness to participate in the study. The study's findings revealed that senior high school studentpreneurs encounter various challenges, including time management when balancing studies and business. They manage to overcome issues in managing time by prioritizing tasks, identifying what needs to be done, and prioritizing them based on their urgency and importance. Despite these challenges, the participants reported overwhelmingly positive experiences as studentpreneurs.

Studentpreneurs reported personal and financial growth and a sense of empowerment as they developed their businesses. They also expressed satisfaction in contributing to their families' finances and supporting their education expenses. This study proposed a booklet to teach studentpreneurs about management practices and strategies. This research sheds light on the challenges faced by studentpreneurs at General De Jesus Colleges. Time management and Balancing School and Business were identified as significant obstacles during their entrepreneurial journey. By understanding and addressing these specific hurdles, educators and policymakers can better support and empower young entrepreneurs, fostering an environment where their ventures can thrive despite their inherent challenges. This study also provides recommendations about the management strategies that current and future studentpreneurs can use in their entrepreneurial venture. This is why this study proposed a booklet as an output.

Keywords: Studentpreneurs, Challenges, Management practices, and strategies

Business

Challenges Encountered by the Selected Family Business Owners That Are Short-Staffed in San Isidro, Nueva Ecija

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Shelvie Guinto
Jade Nicole Sahagon
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Many family business owners in San Isidro, Nueva Ecija, experienced a significant staff shortage. Limited human resources harmed many elements of business operations, including customer service, order fulfillment, and general productivity. Understanding the specific problems these short-staffed family business owners encountered was critical for devising successful methods to address and overcome these challenges. This study aimed to investigate and identify the challenges encountered by chosen family business owners in San Isidro, Nueva Ecija, who dealt with staff shortages, as well as their strategies to overcome them. The researchers employed a phenomenological design to determine the experiences of the ten family business owners of Poblacion, San Isidro, and Nueva Ecija regarding their challenges and coping strategies. A purposive sampling technique was utilized to select the respondents for this study.

Additionally, semi-structured interviews and audio recordings were employed to gather data from the respondents. This study investigated the issues that short-staffed family business owners experienced and the techniques they used to deal with personnel shortages. In managing operations, the problems encountered by the respondents were: (1) lack of human resources and reliable support, (2) struggles in balancing tasks, (3) increased individual workload, and (4) inability to handle customer demand effectively. The study emphasized the need for coping mechanisms, which the respondents utilized. The study examined how personnel shortages affected customer service, order fulfillment efficiency, and sales and marketing success. This study examined the problems that short-staffed family businesses faced and their strategies to deal with them. Most respondents encountered issues such as a lack of resources, challenges balancing tasks, and an increased workload. The study emphasized coping mechanisms, support systems, time management, planning strategies, self-management and accountability in teamwork, customer service, money management, workload, and sacrifices. Furthermore, the study revealed how staff shortages affected their business operations, specifically customer service, order fulfillment, and sales.

Keywords: Family Business Owners, Staff Shortage, Lack of Human Resources, Challenges, Coping Mechanisms, Teamwork

Business

Effectiveness of Social Media as a Marketing Tool for Advertising Small Businesses

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This study aims to determine the effectiveness of social media as a marketing tool when it comes to advertising small businesses. As we all know, social media is a powerful online platform because of how it influences people. Moreover, social media has become a new communication medium, making spreading information about certain things more accessible. This paper investigates how helpful social media is to small businesses and the opportunities it gives entrepreneurs to market their businesses. The researchers used descriptive quantitative research, which focuses on collecting numerical data and using it to understand a specific phenomenon or generalize it across groups of individuals. It is a design that includes the data's description, recording, and interpretation. It summarizes the benefits of social media and how it helps small businesses have more consumers or customers due to its ability to reach multitudes. This paper shows the limitations of social media as a marketing tool compared to the traditional advertising of small businesses due to not seeing an organization's actual product or services. Another disadvantage is it is difficult to measure, time-consuming practice, security and privacy policy issues, and vulnerability to competition. In addition, it can quickly destroy the image of a business by having negative feedback. The results show that social media allows businesses to reach a wide audience at a low cost compared to face-to-face advertising. Social media does help small businesses to build their names in the corporate world and engage with customers. The findings indicate that social media use affects consumer satisfaction during information search and alternative evaluation phases, with satisfaction rising as the consumer moves closer to the final buy choice and post-purchase review.

Keywords: Social Media Marketing, Advertising Small Businesses

Business

Obstacles Faced by Selected Sole Proprietors in Their Small Business in San Isidro, Nueva Ecija

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Business owners must be prepared for the challenges and know how to overcome them. Thus, this study aimed to explore the challenges of sole proprietors in their small businesses, how those challenges affect their decision-making, examine their strategies for overcoming these obstacles, and how challenges affect their decision-making. The design selected for this research study was phenomenological research design and examined the experiences of 10 selected sole proprietors. The data gathering used in this study are research questions and voice recorders. The respondents of this study were the ten selected sole proprietors with a 1-year experience in the small business field and at least ten employees in San Isidro, Nueva Ecija. In this study, it addresses respondents' challenges when it comes to poor business sales. The respondents were also having problems with price increases of products because their price was too high compared to before. Also, the place of their business became a problem because of parking and unexpected events like creating new buildings. Decision-making was also affected because of those challenges. They are having difficulties making decisions due to the challenges they experienced. The coping strategies used by sole proprietors are reducing the number of employees, it can help decrease labor costs and prevent a lack of income when they're having a poor business sale. Also, getting help from customers' feedback leads them to provide what they should improve in their business.

In conclusion, the challenges experienced by the sole proprietors were poor business sales, price increases, and place problems. Moreover, it was found that the challenges experienced by sole proprietors affect their decision-making, with respondents having difficulties. The most common coping strategies used by sole proprietors include reducing the number of employees and getting help from customers' feedback.

Keywords: Obstacles, Sole Proprietors

Business

Levels of Motivation of the Selected Non-teaching Personnel of General de Jesus College and Its Effects on Their Work Performance: A Qualitative Study

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Motivation is one of the most crucial elements in a workplace. It serves as a driving force to keep an employee working harder and meeting their organization's goals. On the other hand, Non-Teaching Personnel are often cited as the “invisible workforce” as most institutions do not focus on them, despite being an essential part of an organizational setting. Therefore, this study focused on the levels of motivation of the Non-Teaching Personnel of General De Jesus College and how it affects their work performance with the use of Abraham Maslow’s Hierarchy of Needs Theory to know how motivated they are and determine what are their met and unmet needs despite not being the focus of most organizations. A descriptive method was used in this study; the specifically phenomenological approach was used to gather data from ten (10) Non-Teaching Personnel that were selected through purposive sampling. In-Person surveys, Face-to-Face Interviews, Semi-Structured Interviews, and Audio Recordings are the tools used to collect data. Most Non-Teaching Personnel are aged 51-60, and most work for 1-30 years. The Non-teaching Personnel’s motivation to work is their family, as it inspires them, salary because it gives them the means to provide for their needs, and the welcoming workplace environment. Those motivations greatly affected their productivity and enthusiasm to work, driving them to improve themselves. They could also attain their needs at every level of the Hierarchy of Needs. Still, regarding Physiological Needs, the younger Non-Teaching staff are not satisfied with their salary and see the need to increase it to motivate them.

Moreover, a combination of older and young Non-Teaching staff were still aiming to improve themselves so they would reach their full potential, Self-Actualization. This study proposed a booklet to help address the needs and uplift the motivation levels of every staff according to Maslow's Hierarchy of Needs. It is concluded that the Non-Teaching Personnel are from the older demographic of 51-60 years old and are working for a long time in the institution. They were also able to reach all the levels in the Hierarchy of Needs, but the younger staff were still not satisfied with Physiological needs as they were not pleased with their salary. Both older and young Non-Teaching Personnel were still aiming to improve themselves to achieve their self-goals and full potential. Consequently, this study presented a booklet to help an institution address its personnel's needs and motivate them.

Keywords: Motivation, Employee, Abraham Maslow, Hierarchy of Needs

Business

Advantages and Disadvantages of Having a Business in Populated Location According to Business Owners at Public Market in San Isidro, Nueva Ecija

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This research aims to understand the different advantages and disadvantages aspiring business owners can encounter when choosing a location for their business and their implications on the business. It aims to determine the factors that come into play when setting up a business in a densely populated location like the public market at San Isidro, Nueva Ecija. The main goal of this research is to aid business students and aspiring entrepreneurs in choosing a location that fits their business goals and circumstances. The research aims to conduct descriptive quantitative research to provide sufficient information to all those seeking it out. Many factors affect whether or not it is worth setting up a business in a densely populated location, such as intense competition, security of the area, overcrowding, ease of access, growth potential, and many more related factors. Business owners should look into such information to make an informed decision. Therefore, having a business in a populated location can cause both advantages and disadvantages of the business. The significant findings of the research displayed that whether or not it is appropriate and recommended to set up a business in a populated area depends on the type of business, how the business owner handles it, and the varying circumstances their business exists in. As for the respondents' demographic data, females were likelier to own a business in the public market because the study found that they were more business-minded than males. The researchers also discovered that most respondents had had businesses that were in operation ranging from 1 to 5 years.

Additionally, the largest age group that the respondents belonged to ranged from 30-39 years old. From the research findings, the researchers surmised that business owners were aware of both disadvantages and advantages but fell short when identifying the specifics according to the type of business. In a conclusion to the study, the researchers found that the research was insufficient. This is because the researchers were able to affirm that business owners in the public market of San Isidro, Nueva Ecija, are aware of the different advantages and disadvantages of having a business in a densely populated area. However, insufficient research was done when it came to uncovering the specific variables that were involved in such. The researchers then recommend business owners seek out a more comprehensive study and for future researchers to utilize the current study to understand the gaps that need to be filled with information.

Keywords: Advantages, Disadvantages, Populated Location

Business

Social Media's Role as a Marketing Platform for Small Food and Beverage Businesses

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This research paper aims to explore the role of social media as a marketing platform for small food and beverage businesses. Specifically, it aims to examine the benefits and challenges of utilizing social media for marketing purposes and its influence on customer behavior and purchasing decisions. The researchers used qualitative research methods to conduct semi-structured interviews with ten small business owners who successfully used social media for marketing. These entrepreneurs met two criteria: they used social media or an online platform for their business and had at least one year of business experience. The findings of this study reveal that social media provides an excellent opportunity for small food and beverage businesses to increase brand awareness, engage with customers, and boost sales. However, the success of using social media as a marketing platform depends on businesses' ability to develop a comprehensive social media strategy aligned with their overall marketing goals and stay up to date with evolving trends and best practices. Respondents also acknowledged the challenges of using social media, such as fake buyers, bad reviews, competitors, and poor internet connection.

Nonetheless, they recognized the convenience and accessibility of using social media for marketing purposes. Guidelines for social media marketing that will benefit small business sectors have been proposed as an outcome of the data gathered from the respondents. To conclude, this research paper emphasizes the growing importance of social media for small food and beverage businesses. It provides insights into how businesses can optimize their use of social media to achieve their marketing goals, such as developing a comprehensive social media strategy and keeping up with current trends and best practices. The findings of this study highlight the benefits of social media for small businesses, and this study provides guidelines for social media marketing that will benefit the small business sector.

Keywords: Social Media Marketing

Business

Struggles of Selected Chicken Meat Vendors in Wet Market of San Isidro, Nueva Ecija in New Normal

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San Isidro, Nueva Ecija, is an agricultural municipality in the Central Luzon region of the Philippines, with approximately 46,000 people. The municipality's economy is primarily based on agriculture and livestock production, and it has several wet markets where local vendors sell various products, including chicken meat. This study mainly focuses on the challenges chicken meat vendors face in the new normal situation in San Isidro, Nueva Ecija. The main goal of this study was to identify the difficulties and problems faced by chicken meat dealers in San Isidro, Nueva Ecija, in the post-pandemic new normal. This study employed a phenomenological design, a qualitative research strategy called phenomenological research, and the questions "how" and "what" so the researchers could know the experience in the daily life of the vendors they investigated. The respondents were selected chicken meat vendors in the wet market of San Isidro, Nueva Ecija. The researcher's instruments used in the data gathering were interviews and audio recordings. The study revealed that the respondents experienced a significant loss in income due to the pandemic since many of them lost their jobs and went bankrupt because their business was in debt. The price increases made them close their business. It led them to borrow money to cope with their business since they lack investments and have lost money due to high costs that are continually rising for them to feed their family. They also experienced a lack of supplies because there were no suppliers of chicken meat during the pandemic. In this study, the problems experienced by most chicken meat vendors were loss of income, bankruptcy, and lack of supplies. The chicken meat vendors' coping strategy was to borrow money from others to resolve their problems and feed their families. The study showed that chicken meat vendors suffered a significant loss during the pandemic and are still coping with the new normal.

Keywords: chicken meat vendors, new normal

Business

Banana Vinegar: An Alternative for Ordinary Vinegar

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STEM 12 researchers saw potential in banana plants: to make vinegar out of banana fruit. The study aims to explore banana vinegar as a potential alternative to ordinary vinegar. The research aims to investigate banana vinegar's production process, chemical composition, and sensory attributes, considering its potential health benefits and culinary applications. The study aims to provide valuable insights into the feasibility of banana vinegar as a sustainable and nutritious alternative in various industries. This study used a multiple-method design. Purposeful sampling was used to gather data from selected respondents who were most likely to provide relevant and meaningful information. A descriptive design was also used to conduct this research on vendors. Thirty-two people from San Antonio, 28 from San Isidro, 12 from Cabiao, and eight from Jaen responded to constructed questions and questionnaires to collect numerical data. Using a questionnaire, the data and information needed in the study were gathered from 80 San Antonio, San Isidro, Cabiao, and Jaen respondents. The results show that the respondents are likelier to want banana vinegar produced. The factors that affected their answers were its unique taste and the health benefits it had. The respondents also said that the smell must be lessened to match other consumers' preferences for the product. The results demonstrate that banana vinegar is possible as an alternative, especially for consumers who want to use sweet vinegar to make their meals and sauces.

Keywords: Banana Vinegar, an Alternative to Ordinary Vinegar

Business

Preference of Selected Grade 12 Students of General de Jesus College Towards Buying Foreign Brands

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With the increased availability of foreign items, consumers have more options, which might lead to difficult purchase decisions. Research has shown that customers frequently associate foreign brands with superior features, particularly in emerging economies where local brands are unrecognizable. This study aims to identify the factors that impact each consumer's choice while purchasing foreign brands. The researcher employed marketing dimensions through the descriptive research method to carry out the study. It focused mainly on 248 Grade 12 senior high school General De Jesus College students. The structured questions were used as the foundation of the survey to gather data, determine, examine the respondents' preferences when purchasing foreign brands, and discuss the implications of the findings on the local brands. The selected Grade 12 students from ABM, HUMSS, and STEM strands participated in this study. The results showed that the respondents perceived that advertisements, brand equity, celebrity endorsements, country of origin, quality, and price play a significant role in their preference when buying foreign brands. The researchers found that the respondents generally preferred foreign brands of products and services. This indicates that consumers preferred foreign brands to local brands, considering all the factors as their preference. The results also demonstrate the implications for manufacturers and local brands sellers. Finally, the results demonstrate that businesses need to understand and use these factors effectively to position local and foreign brands more effectively in the global marketplace. By leveraging the factors influencing consumers' preference for local and foreign brands, businesses create a more compelling brand image and increase brand recognition, ultimately leading to increased sales and profitability.

Keywords: Foreign Brands, Local Brands, Purchasing Behavior, Preference

Business

Development of Multi-Purpose Scented Candle With Crushed Mussel Container

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This study aimed to examine the combination of mosquito-repellent qualities in a scented candle to create a better convenient product with multiple motives. The researchers aimed to provide a more affordable and valuable scented candle containing different purposes such as a source of fragrance and light, relaxation, concentration and aesthetic, and lastly, a repellent for mosquitoes. The researchers proceeded with descriptive and developmental analysis methods to design the study. For the security of the study's effectiveness, a random sampling method was applied to select the most suitable respondents. A survey/questionnaire was used for the data collection. The study participants were one hundred (100) 11th and 12th-grade students from General De Jesus College for 2022-2023. Plenty of learners who took part in our survey evaluated the goal of our proposed product, which resulted mainly in 1) the development of a scented candle and 2) the purpose of the product. The respondents respond to the development of the product. Using multi-purpose scented candles as a relaxing and mosquito repellent was highly regarded. In terms of its purpose, development, and quality, the implementation received high appreciation.

In conclusion, the findings revealed that scented candles have many advantages for people of any age and are reasonably helpful for future researchers. Different kinds of people can benefit from the multiple purposes of the product, mainly from the new additional characteristic, repellent for mosquitoes. Overall, this study serves as a convenient resource for future researchers in this specific field because it gives them a fair amount of information and guidance for their own research.

Keywords: multi-purpose, mosquito repellent, scented candle

Business

Challenge and Strategies of Selected Ukay-Ukay Owners on Handling Their Clothes Stores in Gapan City, Nueva Ecija

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Ukay-Ukay is a boutique that sells used or second-hand clothing, purses, and other items at rock-bottom costs. With this, this study's objective is to determine the challenges encountered by the respondents and the business strategies and motivation they used to overcome their ukay-ukay business in Gapan City, Nueva Ecija. The researchers applied a phenomenological research approach in this study; a total of eight ukay-ukay owners were selected from Gapan City, Nueva Ecija, using purposive sampling. A semi-structured interview and audio recording were used to collect data from the respondents. The challenges that most respondents experienced were (1) having damaged clothes, which is not avoidable in the ukay-ukay business, and (2) having lots of competitors and ruining others' reputations for their own sake.

On the other hand, most respondents revealed that their strategy to keep their business operation is all about sales talk to convince the customers. Finally, most respondents revealed that their family is the number one motivation to overcome their challenges and keep going in the world of ukay-ukay business. In conclusion, having an ukay-ukay business tends to have joint issues with their product, such as (1) having damaged clothes, which is unavoidable in having this kind of business, and (2) high competitors, and those who will ruin someone's reputation. While in strategy, Ukay-ukay owners tend to do sales talking with their customers to encourage them to buy their product. Then, the ukay-ukay owners used their families to motivate them to continue their business.

Keywords: Ukay-ukay, Challenges, Strategies

Business

Knowledge and Understanding of Selected Senior High School Students of General de Jesus College on Misleading Advertisement

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Misleading advertisements have become a prevalent issue in today's consumer-driven society. Advertisers, driven by profit, sometimes resort to unethical practices such as exaggerating product benefits, manipulating statistics, or concealing unfavorable information. The study tries to determine the impact of misleading social media advertisements on the respondents and how they can avoid being deceived. This study employed the advertising value theory and source credibility through descriptive research. It focused mainly on 206 senior high school students in General De Jesus College using simple random sampling. Structured questions served as the basis of the survey questions to examine the impact of misleading advertising. The findings show that misleading advertisements significantly impact the respondents' trust, emotions, financial and medical losses, and perceived interactivity. Given the situation, the respondents suggested that for them not to be misled by deceptive social media advertisements, it is crucial to examine them critically and assess them impartially. Finally, the results emphasize that the respondents recognized the various impacts of misleading social media advertisements. Such knowledge and understanding tend to result in the respondents' positive experience as they become better informed, critical thinkers, and mindful before purchasing any products or services offered in social media advertisements; thus, they can avoid being misled.

Keywords: Misleading Advertisement, Consumer, Advertiser

Business

The Struggles of Selected Small Food Cart Business in Restricted Public Zoning Area in Gapan City

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Today's leading small business to start in the Philippines is the food cart industry. The food cart industry is described as today's top small business to enter the Philippines. The market trend in the country also shows that engaging in the food cart industry is one of the top options for entrepreneurs. Above all small businesses in the Philippines, establishing a food cart business is the easiest and fastest option. In restricted areas, they are not allowed to move to other locations because there are people stationed elsewhere, and each cart has its spot, so they cannot move their cart. This presented study examines the struggles of food cart vendors and owners and how they overcome or deal with the challenges in their businesses. Using qualitative research methods, researchers use phenomenological design, which describes the lived or struggled experience of a concept or phenomenon. The researchers conducted semi-structured interviews and used audio recordings with ten selected small food cart businesses in a restricted public zoning area. The researchers have a criterion for selecting respondents, which includes having selected respondents in a restricted area and at least one year of experience in the food cart business. Ten selected small food cart vendors/owners in restricted areas are the respondent. This study shows that food cart owners/vendors experience struggles when it comes to poor weather conditions, particularly the floods that ruin their business. Also, another struggle of the respondents is the lack of customers in restricted areas due to the restricted public zoning area. Respondents have only a limited area in which they can sell their products, which causes them a lack of customers. The respondents overcame these struggles by closing their businesses immediately when they found out it had terrible weather and also approached their customers to introduce their product.

Moreover, having the patience to keep the business running and avoiding too many loans to invest in the business are the recommendations to settle the food cart vendors/owners for aspiring food cart vendors/owners. The findings of this study reveal that many food cart vendors and owners experience struggles or challenges in their businesses, such as poor weather conditions and a lack of customers. However, respondents overcame the challenges by immediately leaving the workplace and dealing with customers by approaching them. The respondents also give recommendations such as having patience in selling and avoiding too many loans.

Keywords: Food cart vendors/owners, struggles, restricted area

Business

Challenges Encountered by the Selected Small Carinderia Owners of Poblacion, San Isidro Nueva Ecija

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Small business owners are responsible for managing all aspects of their business, including creating business plans, managing staff, setting business strategies, etc. So being a carinderia owner means managing all aspects of their business, including preparing and serving food, managing staff, providing customer service, and more. This study aimed to determine the challenges the selected small carinderia owners encountered in Poblacion, San Isidro. This qualitative study employed a phenomenological research approach. Ten (10) small carinderia business owners who agreed to complete the interview for the researchers or provide data to be analyzed for the research study took part as respondents. The respondents can be anyone of any age if they are related to the study. The respondents should have at least five months of experience in their business to give the exact information this research needs. Every carinderia owner faces conflicts and challenges in managing their business. The majority of them encountered problems, namely: (1) price increases of ingredients due to inflation, (2) low sales, (3) leftover food/ unsold food, (4) competitors, (5) non-paying customers; and lastly, (6) discouragement because of the problems they experienced. They handled their business by having solutions such as (1) a change in pricing to solve the problem of price increases of ingredients due to inflation; (2) making a new dish out of unsold food; (3) having loyal customers is also their strength when sales are low; and (4) thinking positively is their solution to discouragement because of problems they experienced. The study found that although carinderia owners faced difficulties that caused them many troubles, they successfully overcame them by coming up with solutions and tactics.

Keywords: 1867

Business

Development of Friendly, Aloe vera Unscented Paper Soap

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This study aimed to investigate the properties and usability of unscented paper soap, an innovative product designed to offer affordable and ease of use to its users. The researchers aimed to provide a comprehensive understanding of the features and benefits of this product, including its efficacy in cleansing, compatibility with different skin types, and environmental impact. The researchers utilized both descriptive and developmental analysis methods to design the study. A purposive sampling method was employed to select the most suitable respondents to ensure the study's effectiveness. The data was collected using a questionnaire or survey. The study's participants were one hundred (100) grade 12 students from General De Jesus College for the 2022-2023 academic year. Many students who participated in our survey assessed the utilization of the proposed product, which concluded primarily from 1. development of unscented paper soap and 2. considered standards on the product. Substantially, the respondents indeed acknowledged the development of the product. Using unscented paper soap as a hand-washing tool in public was highly considered. The implementation was thoroughly appreciated in terms of its purpose, quality, and design.

In conclusion, the findings revealed that unscented paper soap has advantages for students, the environment, and future researchers. Students can benefit from the convenience and bacteria-fighting properties, especially those with allergies and sensitive noses. The product is also eco-friendly as it dissolves quickly and comes in reusable packaging. Ultimately, this study serves as a valuable resource for future researchers in this field, providing them with a wealth of information and guiding them in their research.

Keywords: Aloe vera, Allergic Rhinitis, Soap

Business

Difficulties Encountered by Selected Sari-Sari Store Owners in Poblacion, San Isidro, Nueva Ecija

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A sari-sari store is an essential neighborhood store that provides goods to the locals in the area. Anyone with a small amount of capital can start a sari-sari store, which is a helpful beginning to get income. This study examines the difficulties selected sari-sari store owners encounter in Poblacion, San Isidro, Nueva Ecija and their motivation to overcome their problems. The researchers used a phenomenological design that determined the experiences of selected eighteen respondents from Poblacion, San Isidro, Nueva Ecija using purposive sampling techniques to determine the respondents. A semi-structured interview and audio recording were used to gather data from the respondents. The challenges the Sari-Sari store owners encountered were Debts, Thefts, and High Competition. Most respondents mentioned that family was the primary motivation for the respondents to overcome problems.

In conclusion, Sari-sari store owners experience debt due to their business operations. This is because there are customers that did not pay them back. Additionally, Sari-Sari store owners experienced being robbed by someone (Theft). The store can rob easily because of its lack of employees. Lastly, another problem that Sari-sari store owners encountered was High Competition because there are many sari-sari stores nowadays. Their motivation to continue opening a sari-sari store was their family. The sari-sari store was their source of income to feed and sustain their everyday needs.

Keywords: Sari-Sari Stores, Sari-Sari Store Owners, Small Enterprises

Business

A Phenomenological Study: Struggles of GJC Senior High School Student Part-Time Workers

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Jillean Grace Gatuz
Mizzelle Joii Gonzales

When the pandemic reached the Philippines, everyone had to adjust to new conditions, especially the most affected students (Van et al., 2010). According to Abenoja et al., in 2019, students with part-time jobs faced various challenges compared to other students. This study's purpose was to refine further the conclusions, present guidelines for helping student part-timers build coping mechanisms and tactics, and seek why the respondents have joined their part-time jobs. This study aims to provide detailed information regarding the respondents' experiences as student part-time workers during and after the pandemic. Additionally, it seeks to address the problems that student part-timers encounter by offering possible solutions. The researchers utilized a qualitative methodology, precisely a phenomenological approach to identify student part-time workers' struggles during and after the pandemic. The interview used ten (10) respondents from the Senior High School Department working part-time. The study effectively obtained carefully analyzed data to address the research objectives using a recorded face-to-face interview, a voice recording, and a semi-structured interview. The result shows that the respondents work on art commissions and in business. Most of the respondents claimed that they struggle with time management. And they developed more effective time management skills by creating and planning their schedules, which helped them handle the many tasks they had to complete because they had several responsibilities. In this study, student part-time workers battled with time management. Combining education, work, and other obligations is difficult for them. Most students adopted time management as a coping strategy to address their difficulties. Managing their time well allows them to deal with their difficulties.

Keywords: working students, part-time jobs.

Business

Difficulties Faced by Selected Small Restaurant Owners in Cabiao, Nueva Ecija in Using Digital Marketing

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Modernization introduces a ton of cost-effective strategies, especially in businesses. With the introduction of online platforms, digital marketing began with social media, and advertising became less hectic for different companies. Every success comes with challenges. As digital marketing provides undeniable benefits, it still comes with its difficulties and challenges. This study provides the common difficulties faced by selected small restaurants that use social media marketing, how they overcome such challenges, and what strategies they can recommend to others. This study used a phenomenological design that tends to discover the respondents' experiences. It was conducted at Cabiao, Nueva Ecija, with purposive sampling to determine the respondents. This study has eight small restaurant owners who were chosen and accepted the interview proposal. The respondents were asked an open-ended question, and their responses were recorded using a smartphone. This study founds that Facebook is the most used social media platform to advertise the respondents' restaurants. However, the most common difficulties small restaurant business owners encountered were negative customer feedback, large menu selection; and high product expectations. To overcome such challenges and difficulties, the respondents' responses address them with kindness, providing realistic content and appealingly irresistible. The recommended strategies the respondents suggested to use Facebook in marketing effectively were minimal presentation and engaging content. To conclude, this study provides insights into the strategies used by small restaurant owners and the challenges they face while marketing on Facebook. This study's findings can be valuable for business owners and researchers interested in using social media as digital marketing and building practical marketing abilities.

Keywords: digital marketing, small restaurants, difficulties in using social media marketing

Business

Challenges of Selected Proprietors of Thrift Stores in San Isidro, Nueva Ecija in Using Social Media Marketing

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Jarish Cheska Baluyot
Bianca Clarisse Tolentino
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For business owners, having more knowledge about what challenges they will encounter and how they will solve the problem without losing money are the most crucial things for them. It requires more than coming up with a brilliant idea and working hard to solve the challenges they encounter. In this study, the researchers explored the challenges of thrift store owners and how they overcame them. The phenomenological qualitative method was employed in the study to help the researchers gather and understand the experiences of thrift store owners in using social media marketing. The researchers used interview questions and an audio recorder to gather the data needed. A total of 8 owners in San Isidro, Nueva Ecija, were the respondents of this study. This study has shown that challenges can't be avoided in using Facebook to sell products. There are circumstances in which the owners experienced getting restricted by Facebook, and they encountered some unfavorable consumer behavior which led them to find ways to overcome these challenges. Creating another account when they get restricted helps them to be still able to promote and sell their products as well as to reply to customers' messages and comments.

Additionally, the owners did a repricing strategy, wherein they lowered their prices when they encountered unfavorable consumer behavior, which helped them to sell their products without losing money effectively. Despite the challenges encountered by the thrift owners, it is clear that their way of overcoming these has been effective to them. The findings of this study revealed that many thrift store owners who participated in this study experienced challenges such as getting restricted by Facebook as they use it for their business and encountering some unfavorable consumer behavior. However, they overcome these by creating another account to be still able to promote and sell products and reply to customers' messages or comments. They also do a repricing strategy for the customers' demands without losing money.

Keywords: thrift store owners, challenges, thrift store, restricted, Facebook, unfavorable consumer's behavior, repricing, creating another account

Business

Marketing Strategies of Selected Milk Tea Shops in Barangay Poblacion, San Isidro, Nueva Ecija

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Business owners regularly develop strategies for the output of their business operations. These marketing strategies' effectiveness depends on the preferences and reachability of their target market, along with the choices of the owners and managers based on what they choose as more suitable for their business's growth. This study aimed to explore the marketing strategies of selected milk tea shops in Barangay Poblacion, San Isidro, Nueva Ecija. The descriptive method was used. Using a phenomenological research approach, the researchers could interpret the respondents' answers individually and in full detail. Six (6) milk tea shop owners in Barangay Poblacion, San Isidro, Nueva Ecija responded to an interview conducted by the researchers. A semi-structured interview was conducted, where the questions were set but still gave the respondents the ability to give fully expressed answers. This study was done in Poblacion San Isidro, Nueva Ecija. This study found that the marketing strategies that milk tea shop owners used are as follows: (1) use of social media marketing for advertisement and influence since many students use social media like Facebook and Instagram; (2) promos are used to attract customers so that the sales and popularity increase; (3) having an affordable price of products ; (4) providing good quality products that help them achieve the loyalty of their customers; and (5) maintaining the attractiveness and safety of the shops' environment which have a good impact on customers behavior and sales. The study found out that the marketing strategies used by the respondents, which are the use of social media marketing, giving promos, having affordable prices, providing good quality products, and maintaining the attractiveness and safety of the shops' environment, all lead to a high chance of business success, smooth business operation, and their customer's satisfaction. The results demonstrate that by implementing these strategies, businesses could attract new customers, retain existing ones and ultimately boost their sales.

Keywords: Study the strategies of milk tea shop owners, Marketing strategies, Bubble Tea Business

Business

Strategic Management of the Selected Coffee Shop Owners at San Isidro and Cabiao, Nueva Ecija

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There are a large number of people who aspire to become a business owner someday. Also, the market of the coffee segment is expected to grow by 2023. Furthermore, a coffee shop has become a necessity and a habit in modern society. Knowing that coffee shops can be a great business choice, this study aims to determine the strategic management of the selected coffee shop owners at San Isidro and Cabiao, Nueva Ecija. This study also aims to provide guidance and support for aspiring entrepreneurs. The researchers used a phenomenological approach in this study where it described as accurately as possible the phenomenon, refraining from any pre-given framework, remaining true to the facts, and knowing the respondents' experiences. The respondents contributing significantly to this study were selected using a purposive technique. The researchers gathered data with the use of semi-structured interviews and audio recordings. The respondents in this study are the seven (7) selected coffee shop owners at San Isidro and Cabiao, Nueva Ecija. In this study, the respondents tend to have difficulties with the high pricing of the coffee because many customers cannot afford their coffee. Also, respondents experienced poor inventory management, leading them to run out of stocks and supplies.

On the other hand, Customer Analysis is a big help for respondents because this enables them to know their target customer and their needs. Moreover, social media marketing is a practical strategic management that an owner can use in running a coffee shop business, especially in promoting their products. It is recommended to be unique from competitors and have a Customer Analysis when starting a coffee business. In conclusion, the coffee shop owners experienced challenges regarding the high pricing of the coffee and poor inventory management. Most owners also stated that they use Customer Analysis and Social Media Marketing as the Strategic Management in managing their coffee shop. The coffee shop owners also stated that these two strategic management is effective. Lastly, most respondents recommended being unique and having a good relationship with the customers.

Keywords: Strategic Management, Coffee Shop

Business

Difficulties Faced by Selected Tattoo Artists in Their Chosen Profession in Jaen, San Isidro, and Gapan City, Nueva Ecija

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Tattoos had a bad reputation in the past that continued from one generation to another. This caused the tattoo artists to lack validation and recognition from other people. This research aims to identify the challenges tattoo artists face in Jaen, San Isidro, and Gapan City, Nueva Ecija, as well as their motivation to overcome these challenges. The researchers used a phenomenological design in conducting this study; a total of six tattoo artists were selected from Jaen, San Isidro, and Gapan City, Nueva Ecija, using a purposive sampling technique.

Moreover, semi-structured interviews and audio recordings were used to gather data from the respondents. From the results obtained, in terms of their difficulties, most respondents mentioned that the problems they encountered included discouragement in continuing their career, no regular clients, high competition, dealing with stigma, discrimination, and physical pain. While according to their motivation to overcome their challenges, the respondents mainly stated that their families inspired them to continue their work. Overall, being a tattoo artist was not an easy career because they experienced discouragement, no regular clients, high competition in the work field, discrimination, stigma, and physical pain. Based on the acquired result, despite the difficulties of tattoo artists, this field still lacks value and acceptance.

Keywords: tattoo artists, tattoo

Business

Striking a Balance Between Business and Studies: Lived Experiences of Senior High School Student-Entrepreneurs at General de Jesus College

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Being an entrepreneur requires a significant amount of time and effort; the same goes for being a student. Through balanced effort exerted on both business and studies, this can benefit student entrepreneurs, the entrepreneurial world, and our economy. With that, this research, "Striking a Balance between Business and Studies: Lived Experiences of Senior High School Student-Entrepreneurs at General de Jesus College," shows the experiences and balancing practices of senior high school student-entrepreneurs at General de Jesus College. This study is a phenomenological study under a qualitative approach conducted among sixteen (16) senior high school student-entrepreneurs selected through purposive sampling. The data were collected using semi-structured interviews and audio recordings. The majority of the respondents stated that the major challenges experienced by them are balancing their business and studies simultaneously and academic struggles. However, the respondents overcame the challenges by setting priorities, time management, and money allocation.

Moreover, the respondents suggest that having a business while studying increases financial capability, and the respondents recommend that through proper time management and prioritizing studies aspiring student-entrepreneurs can balance their time. Lastly, most respondents proposed that time management and separation of personal and business finances are effective ways to balance business and studies simultaneously. Furthermore, knowing priorities, taking advantage of technology, business reinvestment, and having a business partner are the techniques proposed to effectively manage time as a student-entrepreneur, which will be presented through infographics. This study revealed that balancing school with business is the biggest challenge the student-entrepreneurs face. However, by setting priorities, the respondents have overcome the challenges. Moreover, most respondents suggest that aspiring student-entrepreneurs should know proper time management as time management will help aspiring ones to effectively manage business and studies simultaneously, which will be presented through infographics.

Keywords: student-entrepreneur, management, balance, academic

Business

Challenges Encountered and Its Effect on Business Operations of Coffee Shop Owners at Gapan, San Isidro, and Jaen

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A coffee shop owner holds a myriad of responsibilities to ensure the smoothness and success of their establishments. Primary responsibilities include providing excellent service, supervising staff, and managing day-to-day operations. This study aims to determine the challenges encountered and their effect on the business operations of coffee shop owners in Gapan, San Isidro, and Jaen. Also, this study wants to know the motivation of coffee shop owners to overcome the challenges they've encountered. This study used a phenomenological design where researchers discovered the experiences of selected seven respondents from Gapan, San Isidro, and Jaen regarding their challenges encountered and their effects on their business operation of coffee shops. Researchers used a purposive sampling technique, semi-structured interview, and voice recorder to gather the information the researchers needed for this study. This study showed that most respondents experienced no customers and the wrong shop location. Motivation is a process of taking action to achieve their goals. The motivations used by the coffee shop owners were their family and friends to help them to continue their business.

In conclusion, They've experienced having no customers and the wrong location of the shop. The challenges coffee shop owners face in Gapan, San Isidro, and Jaen significantly impact their businesses. However, their motivation and resilience have allowed them to find innovative solutions to overcome these challenges and continue providing quality service to their customers. These coffee shop owners must continue adapting and remain competitive in the ever-changing business landscape.

Keywords: Motivation, Coffee shop

Business

Effective Strategies of Milk Tea Shop Owners of San Isidro Nueva Ecija for a Successful Business

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Effective strategies are the primary thing business owners do, especially in milk tea shop businesses. Milk tea shop owners have unique, practical strategies to apply to their businesses. That is why this study aimed to determine the effective strategies of milk tea shop owners for acquiring and keeping customers and how it helped them gain profits. The researchers employed a descriptive-qualitative research approach and used a semi-structured interview and audio recording to gather data from the respondents, where the researchers prepared interview questions for the respondents to answer. A total of 8 milk tea shop owners were interviewed from San Isidro, Nueva Ecija, using a purposive sampling technique. This study showed that four respondents claimed that sales and promotions were the techniques necessary to grow the company; the remaining four fall into the categories of internet advertising, distinctive products, and innovation. Three respondents mentioned that their profit increased because they had more customers and because of digital marketing/online advertising. Fifteen percent of the profit came from milk tea. The rest stated that the profit depends on everyday sales. Based on the results, Most respondents are using different strategies, such as Sales and Promos as well as Online Advertising which helps their businesses become known and increase the number of customers.

Keywords: Strategies, Profit, Owner's

Business

The Challenges Faced by Small Businesses Around San Isidro, Nueva Ecija During “The New Normal”

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The new normal" refers to the post-pandemic period characterized by significant changes in business operations. It emerged due to the pandemic, which led to widespread disruptions across industries worldwide. Small businesses, in particular, faced numerous challenges during this period due to their limited resources and operational capacities. Understanding the impact of the New Normal on small businesses, which often rely on local The new normal introduced a range of obstacles for small businesses to overcome. A descriptive design was used in this study to determine the challenges faced by small businesses around San Isidro Nueva Ecija During The New Normal. Descriptive research is a research design that collects data that can be used to analyze a sample of the population statistically. The probability sampling technique distributed A survey questionnaire to the chosen respondents. Practically all of the respondents have had the same difficulties in their businesses, such as losses, and many of them agree with questions because it typically causes them problems in their businesses. Due to the help and support of their responses, everything was successful. The results were checked, classified, tabulated, and analyzed according to the study's research design. The researchers discovered that Small Businesses faced challenges and wanted the government's support. The results demonstrated the challenges small businesses face that require more business knowledge to be functional and study their environment. Many owners lack knowledge of their businesses and experience survival problems. They also face challenges during operation and business starting, such as access to finance and lack of government support—low income and profit. The government is needed to support these businesses and create a positive environment.

Keywords: financial, challenges, business

Business administration

CHEMISTRY

Effectiveness of Using Potato Starch as a Plasticizer in Developing Bioplastic Films

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The adverse environmental impacts of conventional plastics have spurred interest in exploring sustainable alternatives such as bioplastics. Bioplastic is a universal term for polymers made of renewable biomass sources. As a beneficial result, bioplastics usually biodegrade in about 180 days in opposition to traditional plastics, which remain in the environment for decades to centuries. Bioplastics are made of different biomass sources, such as corn starch, potato starch, or cellulose. Plants naturally produce these substances. This research investigates the efficacy of potato starch as a potential plasticizer in developing bioplastic films to assess its potential as an eco-friendly and renewable substitute for traditional plasticizers. To synthesize bioplastic from potato starch, we did some preliminary experiments to determine the adequate proportion of the ingredients. The production of plastic requires a plasticizer (Potato starch), a polymer (Glycerol), a solvent (Water), and an acid (Vinegar). Film formulations are prepared by incorporating different ratios of potato starch into a biopolymer matrix. The films are then analyzed using various techniques to assess tensile strength, elongation at break, water vapor permeability, and biodegradability. The preliminary findings of our experiment indicate that potato starch can be used as a plasticizer. The experiment results indicate that a film composed of 125 milliliters of solvent (water) and 11 grams of plasticizer (potato starch) is flexible and dense, which can be used for several applications in daily life. The test results indicated that the produced films could withstand an average of 3.56 newtons, elongation could average 9.3 millimeters, and elongation could average 9.3 millimeters. The findings indicate that potato starch can be used in developing bioplastic films in terms of tensile strength, elongation at break, water solubility, and biodegradability. By providing enhanced flexibility and elongation properties, potato starch offers a promising avenue for the development of sustainable and eco-friendly bioplastics. This plasticizer could be used to produce bioplastic, which could be ecologically and cost-effective. Furthermore, using potato starch as a plasticizer aligns with sustainability principles, as it is derived from a renewable and readily available resource.

Keywords: Bioplastic, Potato starch

Chemistry

Sodavin: Fire Extinguisher as a Substitute for Regular Fire Extinguisher

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STEM 12 - Maxwell Researchers focusing on medicine have created several exceptional data-based inventions. The item's primary purpose is to assist people in effectively immediately putting out a fire in their houses. This research aims to evaluate the practicality, cost-effectiveness, and effectiveness of using baking soda as an eco-friendly alternative to traditional fire extinguishers to address environmental challenges related to fire suppression. We gathered more than 81 respondents using a combination of convenience sampling and purposive sampling to respond to our online surveys and needs assessment questions for residents of specific areas in Nueva Ecija. This research study investigates the perception and need for an alternative fire extinguisher among a sample population. The study involved 51 respondents who participated in a survey. The survey results indicate that most of the sample population perceives a significant need for an alternative fire extinguisher. This suggests a demand for an innovative approach to fire extinguishment.

Additionally, the data reveals that half of the respondents do not currently possess a fire extinguisher at home, further highlighting the importance of increasing access to fire extinguishers. These findings emphasize the necessity for developing and promoting alternative fire extinguisher solutions to enhance fire safety measures in homes. Addressing the concerns surrounding the accessibility, effectiveness, and user-friendliness of traditional fire extinguishers, developing and promoting alternative fire extinguishers can significantly contribute to mitigating the risks associated with fire incidents. In conclusion, baking soda and vinegar can be a helpful substitute for small kitchen fires but should not replace traditional fire extinguishers. There is a need for innovative solutions to address environmental challenges associated with fire suppression, but safety should always come first.

Keywords: Fire extinguisher, vinegar, baking soda

CIVIL ENGINEERING

Utilizing Aggregates Materials of Expanded Polystyrene, Gravel, and Wood Sawdust in the Development of Bricks

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This study aims to develop eco-bricks using expanded polystyrene, gravel, and wood sawdust. The modern brick industry has a problem finding materials to make bricks due to industrialization, economic development, and loss of natural resources such as clay, which is the primary material in making bricks. The researchers devised a solution to this problem by providing alternative bricks, eco-brick. Experimental and observation methods were used. The researchers first developed a theory regarding the bricks that were made. Second, the researchers observed the bricks while they were being tested. The third step in the research process is the data collection phase. Based on the result of the experiment, expanded polystyrene, wood sawdust, and gravel contribute generously to the production of bricks because of their properties. Expanded polystyrene is a suitable adhesive that will hold all the ingredients together, and it has low moisture absorption and tolerance to water to be absorbed. Wood sawdust is suitable for filling the Eco-Bricks and adds a texture to the expanded polystyrene when mixed. The gravel gives strength to the Eco-Bricks and makes it more durable. The experimental results have shown that bricks made from expanded polystyrene, wood sawdust, and gravel have less water absorption and good durability, making them suitable for use in construction. While it's cheaper than ordinary bricks, the durability and water absorption of the Eco-Bricks have surpassed it. Eco-Bricks have the potential to reduce the environmental impact of ordinary brick-making methods. The extraction and processing of raw materials such as clay and sand to make ordinary bricks can significantly impact the environment. By using expanded polystyrene, wood sawdust and gravel is a better alternative than using clay and sand for making brick. In the end, the development of bricks using these materials can also create new job opportunities and promote economic growth, particularly in areas where these materials are abundant.

Keywords: Aggregates, Expanded polystyrene, Wood Sawdust, Eco-Bricks

Civil engineering

Effectiveness of Waste Materials as Substitute for Aggregates in Making Concrete Hollow Blocks

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Waste management is crucial to prevent adverse environmental impacts, such as pollution and depletion of natural resources. According to the Environmental Management Bureau, around 1,400 metric tons of healthcare waste were generated daily from June 2020 to April 2022. Different waste management strategies include waste reduction, reuse, recycling, and disposal. Proper waste management practices can lead to various benefits, such as reduced greenhouse gas emissions, resource conservation, and job opportunities in the waste management sector. This study investigates using wastes, precisely Demolished Crushed Concrete (DCC), Coconut Coir Fiber (CCF), and Polyester Fiber, as substitutes for aggregates in producing concrete hollow blocks. The resulting blocks' compressive strength, water absorption, heat resistance, and density were evaluated and compared to those made with conventional aggregates. The sample with 25%(DCC), 3% Coconut coir, .25% Polyester Fiber and a curing time of 28 days, which is the lowest sample with waste added, achieved (5.54)MPA/803 Psi in the compression strength test. The sample with the lowest waste added has the highest compressive strength compared to the samples with 35%(DCC), 5% Coconut coir, .50% Polyester Fiber and 40%(DCC), 8% Coconut coir, 1% Polyester Fiber. In the test done by the researchers, all the samples are dropped at 4ft. The sample contains 40%(DCC), 8% Coconut coir, and 1% Polyester Fiber with a 28-day curing time. The sample takes (2) drops before it gets damaged and cracked.

Regarding heat resistance, the sample with 25%(DCC), 3% Coconut coir, and .25% Polyester Fiber absorbed heat of 49% with its initial temperature of 36.5°C and final temperature of 54.4°C.

Regarding water absorption, the samples made by the researchers with 40%(DCC), 8% Coconut coir, 1% Polyester, and a 28-day curing time is the lowest compared to the other sample and the standard hollow blocks. The researchers concluded that the sample containing 25%(DCC), 3% Coconut coir, and .25% Polyester Fiber of the total weight of the cement achieved the highest consistency when mixing the mixture compared to the other two with higher ratios. Although adding those specific wastes helps to build strength, As the waste content rises, the strength does not rise linearly. In terms of durability, the waste added to the concrete hollow blocks significantly increases their durability.

Keywords: concrete hollow blocks, aggregates, waste materials, recycling

Civil engineering

Effectiveness of Banana Leaf Ash and Coconut Fiber as Admixtures in Concrete Blocks

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Concrete blocks are widely used in construction for their stability, strength, affordability, and practicality. However, the construction industry must prioritize quality, performance, and sustainability. Given the significant demand and high construction industry costs, this study aimed to develop more efficient blocks using banana leaf ash and coconut fiber as construction materials. Since the construction industry is known as one of the largest consumers of non-renewable resources, the potential function of these admixtures is to produce low-cost and eco-friendly blocks for construction and help reduce waste materials. Admixtures, which offer enhanced characteristics, have become essential in concrete production. This study employed an experimental and developmental approach encompassing material procurement, block construction, specimen curing, testing, and evaluation. Three tests were conducted: tensile strength, water absorption, and compressive strength. The admixtures consisted of varying percentages of banana leaf ash (5% and 10%) and a fixed 5% coconut fiber content. The blocks' durability was assessed after 28 days. Tensile strength tests revealed that blocks with 10% banana leaf ash and 5% coconut fiber exhibited the highest durability, enduring hammering cycles of 795-897 times compared to standard blocks (488-497 times). Water absorption tests indicated that blocks with 10% banana leaf ash and 5% coconut fiber had the lowest percentages of water absorption (1.72%-2.35%) compared to standard blocks (2.27%-2.64%). Compressive strength tests demonstrated that blocks with 10% banana leaf ash and 5% coconut fiber endured the highest number of drops (29-32) before breaking, outperforming both standard blocks (3-10 drops) and blocks with 5% banana leaf ash and 5% coconut fiber (23-24 drops). Incorporating 10% banana leaf ash and 5% coconut fiber admixtures enhances the durability of concrete blocks compared to standard concrete blocks. These admixtures contribute to increased tensile strength, reduced water absorption, improved breakage resistance, and enhanced concrete blocks' performance and lifespan. Furthermore, Further research should be conducted to enhance the durability and flexibility of concrete blocks. Exploring innovative and underutilized alternative materials as admixtures can significantly improve the quality and utility of these blocks.

Keywords: Banana Leaf Ash., Coconut Fiber., Admixtures., Concrete

Civil engineering

Utilization of Bamboo Fibers and Bamboo Strips as an Additive Material in Making Concrete Hollow Blocks

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Various researchers in this field regularly test, observe, and develop potential materials for Concrete Hollow Blocks. In this study, the researchers explored the potential of Bamboo being an additive on Concrete Hollow Blocks to observe further Bamboo as an additive. The researchers used the authentic experimental research design that relies on statistical analysis to prove or disprove the hypothesis. The researchers used three ratios of Bamboo Strips and Bamboo Fibers to add on the Concrete Hollow Blocks, each with different curing periods. The specimens undergo different testing procedures for further analysis of the Concrete Hollow Blocks. The Concrete Hollow Blocks tested showed different results on different testing procedures. The results showed that the Concrete Hollow Blocks with Bamboo Fibers and Strips surpassed the passing value of the Standard Compressive Strength of Concrete Hollow Blocks. The results also showed that the different ratios of Bamboo Fibers and the amount and length of Bamboo Strips gradually affect the Compressive Strength of the Concrete Hollow Blocks. The researchers concluded that the Concrete Hollow Block gradually increases its effectiveness with the correct ratio of Bamboo Fibers and Bamboo Strips. The results also demonstrated the need to analyze further other potential materials that can increase their effectiveness and quality.

Keywords: Concrete Hollow Blocks, Bamboo Fibers, and Strips

Civil engineering

Agricultural Waste as Substitute Mixture in Making Cement Hollow Blocks for More Sustainable-Built Environment

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Hollow cement blocks are commonly utilized in construction due to their benefits; nevertheless, sand demand is increasing due to resource shortages and environmental degradation in the construction industry. In recent investigations, rice husks, egg shells, cow or carabao manure, and coconut shells all exhibit improvements in cement blocks' strength and durability; for this reason, the researchers in this study picked these four components. In addition to addressing the sand shortage and environmental deterioration, this study seeks to ascertain if the selected agricultural wastes can fill gaps in hydration, durability, lightweight, and strength when utilized as coarse and fine aggregates in cement blocks. The experimental research design was suitable for this experimental study. Some tests were conducted, such as compressive strength and weight tests. To determine the difference between standard hollow blocks and the hollow block with substitute aggregates, the ratio 1:2:3 comprised of 50% cement, 20% crushed coconut shells (CCS) as coarse aggregate, and 10% for each of the powdered carabao manure (PCM), pulverized eggshells (PES), and ground rice husks (GRH) for a total of 30% as fine aggregates, and a modified ratio of 1:1:4 of 50% cement, 10% CCS as coarse aggregate, and 15% PCM, 10% PES, and 15% GRH as fine aggregates. The compressive strength test exhibited that the two ratios of hollow blocks made with substitute aggregates performed worse than that of the standard hollow blocks, with 1:2:3 being 51.6% weaker and the modified ratio of 1:1:4 being 26.1%. In terms of weight, however, the two ratios with substitute aggregates had better results, with the ratio of 1:2:3 being 9.7% lighter and the modified ratio of 1:1:4 being 25.8% lighter compared to standard hollow blocks. Based on the tests conducted, the researchers concluded that the weaker compressive strength in hollow blocks made with substitute aggregates is due to the high amounts of silica in the utilized agricultural wastes. As for the decrease in weight of the hollow blocks, this is due to them not having any conventional materials used like sand and gravel, thus decreasing their weight. Furthermore, the amount of CCS as coarse aggregate also contributed to a further decrease in weight in the modified ratio of 1:1:4.

Keywords: Agricultural wastes, Cement blocks, and Aggregates

Civil engineering

Utilization of Coconut Fibers and Aluminum Cans as an Admixture for Concrete

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Standard concrete produces cracks, but the help of natural fibers such as coconut fibers and aluminum cans has been shown to enhance concrete's flexural and tensile strength. By incorporating these materials into reinforced concrete, the researchers aim to develop a more sustainable and economically viable alternative to traditional reinforcement methods. Multiple methods were used. Using experimentation and testing, we conducted a water absorption and compressive strength test on the sample specimens to gather, investigate, determine, analyze, and interpret first-hand data to attain and show the effectiveness of using coconut fibers and aluminum cans as admixtures in reinforced concrete. The researchers conducted different tests to determine the effectiveness of adding 0.5% and 1% of Coconut Fibers and Aluminum Cans as an admixture in Concrete. The Concrete with 1% of the admixtures was tested, and it revealed that adding 1% decreases its compressive strength. The concrete with 2% of the admixture surpassed the passing value of the Standard Compressive Strength of Concrete. The results also showed that the different ratios and the amount of Coconut Fibers and Aluminum Cans gradually affect the Compressive Strength and Water absorption test of the Concrete. The researchers concluded that the reinforced concrete gradually increased its effectiveness with the correct amount of Coconut fibers and Aluminum cans, which is the 2% of admixture. The results also demonstrate the capacity of the reinforced concrete to provide us with durable and eco-friendly reinforced concrete.

Keywords: Aluminum cans, Coconut Fibers, Reinforced Concrete

Civil engineering

The Effectiveness of Using Coconut Ash and Banana Fiber as Additional Components in the Durability of Hollow Blocks

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This study is to promote the usage of coconut ash and banana fiber. In reality, they are seen as trash or, in other words, useless. In this study, we are developing it as an alternative material for making hollow blocks. According to Gomathi M. et al. (2019) stated that hollow blocks created with banana fiber and coconut ash alternative, the test results indicated that the hollow blocks' strength improved. The primary purpose of this study is to prove that banana fiber and coconut ash are strengthening materials in making hollow blocks. This study will use the experimental method. This method is a technique that uses tests and experiments to determine the facts of using banana fiber and coconut ash. This also includes observation which involves making a prediction, carrying out the experiments, and expecting the outcome.

Four boys and Three girls tested the product. It was first put into a drop test with a height of 1 ft, 2 ft, and 3ft. Only minor cracks were obtained during the test. Lastly, the product was fully submerged in water. The researchers put three hollow blocks at different times: one hour, 2 hours, and 3 hours. The product did not crumble underwater and held the water pretty well. The tests had no adverse outcomes. Thus, it was successful—the results and effectiveness of banana fiber and coconut ash as an alternative component.

Keywords: Alternative, banana fiber and coconust ash

Civil engineering

Transforming Waste Into Sustainable Building Material: Exploring the Potential of Agricultural and Paper-Based Fiber-Cement Ceiling Boards

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One of the common materials used in the construction industry is fiber-cement ceiling boards. Numerous compositions of it have been discovered, including the usage of cellulose fiber and asbestos. However, the adverse environmental and health implications caused by these components propelled the researchers to explore sustainable alternatives for producing fiber-cement ceiling boards. In particular, this study explored a new source of fiber that can be obtained from industrial waste papers. Moreover, agricultural waste, such as rice husk and rice husk ash, was then incorporated as a replacement for the composite of commercial ceiling boards. Through a systematic approach involving material gathering, preparation, mixing, molding, pressing, curing, and polishing, samples with varying component ratios conforming to the dimensions of 600x600 x8 mm³ were created. These boards were subjected to ASTM E119, ASTM D570, and BS EN 12467 testing protocols to determine the feasibility of integrating these waste composites into producing fire-resistant, low water-absorbing, and flexible fiber-cement ceiling boards. The results were then evaluated by careful comparisons with the standard, guaranteeing its reliability and effectiveness. A lightweight characteristic became evident within the spectrum of board weights, ranging from 4,304 g to 4,484 g. This attribute underscores the boards' ability to balance structural integrity and ease of handling. The fire resistance test yielded exceptional results, as the samples maintained remarkably low unexposed side temperatures, ranging from 38.1°C to 51.9°C when subjected to a temperature of 140°C for 5 minutes.

Furthermore, the water absorption test displayed the boards' impressive resistance to water infiltration, with absorption percentages from 4.286% to 5.488%. Moreover, the boards exhibited noteworthy flexural strength, as evidenced by the maximum load capacities of 333.62 N to 498.2 N, with flexural strength ranging from 6.516 N/mm² to 9.730 N/mm². The findings conclusively demonstrate the successful production of cost-effective, lightweight, and eco-friendly fiber-cement ceiling boards utilizing agricultural and industrial wastes. These materials, chosen as replacements, significantly contributed to the superior performance observed in various tests, including water absorption, fire resistance, and flexural strength, surpassing the standards set in each aspect.

Keywords: Fiber-cement ceiling board, waste, alternative

Civil engineering

The Effectiveness of Plastic Bottles as an Additive in Making Hollow Blocks

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Plastic or polymer bottles are commonly used daily for containing fluids, condiments, and drinks. Plastic is a malleable, lightweight, moisture-resistant, stable, and relatively affordable product. The excessive use of plastic materials nowadays - plastic bottles significantly leads to environmental problems. Studies show that it will take 20 to 500 years before a plastic composite material decomposes, depending on the structure and environmental factors. Plastic bottles are a significant contributor to this problem.

Additionally, the use of plastic bottles as an ingredient in hollow blocks has the potential to lessen greenhouse gas emissions from the building sector. Compared to conventional materials, this study seeks to determine whether adding plastic bottles to hollow blocks improves their strength and durability. Using plastic bottles as an additive in producing hollow blocks is an effective method for reducing the amount of plastic waste in the environment. Concrete hollow blocks are essential raw materials for constructing structures, buildings, and houses. However, the researchers discovered that a potential aggregate - plastic bottle can be used as an additive in creating concrete hollow blocks. An inventive solution to environmental and construction-related problems is to include plastic bottles as an additive while making hollow blocks. Finding innovative ways to recycle and reuse plastic bottles can help to reduce the problem of global waste. The researchers conducted the study through experimental and observation methods. Plastic bottles were collected from various locations, including school recycling bins, junk stores, and households. The researchers will purchase cement from a nearby home improvement store and sand from any free or cheap location.

Additionally, the researchers will utilize water easily obtained by requesting free water or purchasing water nearby where the research will be conducted. Molders of hollow blocks can borrow materials from factories that make hollow blocks. The researchers conducted three tests which subjected the concrete hollow blocks to plastic bottle additives, in drop test, water absorption test, and heat test, to examine, analyze and interpret the significance of adding plastic bottles to concrete hollow blocks. As a result of the experiment, plastic bottles were an effective additive in making hollow blocks. The experimental hollow block is more effective than Normal hollow blocks. This research aims to produce high-quality hollow blocks with plastic bottles as an additive. In doing so, hollow blocks with plastic waste are more efficient and durable than commercial hollow blocks. Thus, plastic bottles can be additives in making hollow blocks. The results prove that the experiment was practical and proven in the durability, heat, and water absorption tests. Plastic bottles can be used as an additive in making hollow blocks.

Keywords: Effectiveness of Plastic bottles as an additive in making hollow blocks

Dried Mango Leaves (*Mangifera indica*): As Alternative Components for Particle Board (Plywood) Production

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Forests and trees cover over 25% of the Philippines' area, emphasizing the country's rich natural resources. Smallholder farmers widely cultivate mango trees, but dry mango leaves accumulation and improper disposal have raised environmental concerns. Burning these leaves contributes to air pollution and neglects their potential as a valuable resource. In response, researchers aimed to convert waste from dried mango leaves into particle boards for construction, aiming to reduce solid waste and promote environmental sustainability. The researchers employed descriptive and developmental research approaches to understand their research topic thoroughly. The study focused on engineers and individuals with construction backgrounds in the Philippines, specifically in four municipalities within the Nueva Ecija province: Cabiao, San Antonio, Jaen, and San Isidro. Data were gathered through the use of physical questionnaires and personal interviews. From this target population, a sample of 100 participants was derived using purposive sampling. A durable, eco-friendly particle board has been developed from dried mango leaves. The board is optimized for strength, stability, and flexibility to support various applications while resisting environmental factors such as moisture and pests. The particle board made from dried mango leaves meets the necessary strength, durability, safety, and eco-friendliness standards. It exhibits good strength and durability, has low formaldehyde emissions, and is composed of renewable and biodegradable materials, making it a potential eco-friendly alternative to conventional wood-based particle boards. The significant findings suggest a strong interest in using renewable, sustainable materials in construction and business and a willingness to try new products with a low environmental impact. When choosing a product, the respondents consider the durability, cost, and environmental impact. Most participants are willing to use and buy a particle board made from dried mango leaves that is eco-friendly and has comparable durability to the commercially available product. Consequently, there is a need to develop such a particle board to meet the market's demands. Overall, the study provides evidence to support the potential of using this eco-friendly product in the construction industry.

Keywords: Dried Mango Leaves, Particle Board

CLIMATE SCIENCE

Purchasing Behavior and Intention of Selected Senior High School Students, in General de Jesus College Towards Eco-Friendly Products Through Their Packaging

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Climate Change is one of the most significant issues the world is currently dealing with. Pollution, rising ocean water levels, and more health risks are some of its environmental effects. In this study, the researchers aim to determine students' behavior and intention regarding buying eco-friendly packaged products. To carry out the study, the researchers employed the theory of purchasing behavior through descriptive methods. It focused mainly on 210 senior high school students in General De Jesus College. Structured questions served as the basis of the questionnaire to explain the data, identify, analyze, and interpret the results, reach conclusions, and make suggestions and recommendations regarding the consumers' behavior and intention to purchase eco-friendly products. The selected senior high school ABM, HUMSS, STEM, and GAS strands participated in this study which aims to examine their behavior and intention in purchasing eco-friendly products according to external variables, perceived usefulness, perceived ease of use, behavioral intention to use and attitudes towards using the products.

Additionally, the results disclosed that a large majority of the respondents expressed a very high intention of purchasing friendly environmental products significantly. To be précised, the results show the different perspectives and reasons of the respondents toward buying green products. This study indicates that most students prefer buying green products to protect the environment and willingness to eject non-eco-friendly products. Overall, the results demonstrate the respondents' awareness of the importance of reducing pollution and preserving the environment since most firmly intend to purchase eco-friendly products and adopt green living habits. Their idea that social media can be used to spread awareness of environmental solutions and the benefits of being eco-friendly indicates their environmental concerns. Clearly, they were willing to take necessary steps to reduce the negative effects of pollution and protect the environment for future generations.

Keywords: Purchasing behavior, Purchasing Intention, Eco-friendly products

Climate science

COMPUTER SCIENCE AND ENGINEERING

JOJO:Adblocker: Blocking Unnecessary Advertisements for People Who Use Google Chrome

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The Backlinko report from 2021 highlights the growing popularity of Google Chrome as the primary browser, with approximately 2.65 billion users. The user base has increased by 0.48% compared to the previous year, indicating Google Chrome's strong presence in the global market. However, online advertisements have become widespread, appearing in different forms and raising concerns about privacy, security, and web experience. To address these concerns, researchers suggest JoJo: Adblocker as a solution to enhance the user experience by removing website ads. The study aims to evaluate the effectiveness of the Adblocker and identify any potential issues encountered while using it for internet browsing. This study used the Contrast methodology to compare the ad filtering capability and RAM usage of two ad-blocking tools: JoJo Adblocker (a Google Extension) and AdGuard (an application). The researchers aimed to highlight the differences between these tools regarding their ability to filter ads and the amount of RAM they use. They measured the effectiveness of the tools by accessing a website and comparing the number of blocked ad requests to the total number of page requests. RAM usage was measured using Reliability Testing and monitoring changes in memory usage through the computer's Task Manager. The study found that JoJo: AdBlocker, a Google Extension, outperformed AdGuard, an application, regarding ad-blocking effectiveness.

JoJo: AdBlocker performed better by blocking 26% more ads than AdGuard, achieving a high blocking rate of 99% for various ad categories, except for analytics ads. AdGuard, on the other hand, blocked 73% of 137 ad requests across six categories, resulting in 108 blocked ads. However, JoJo: AdBlocker still has room for improvement as it could not block analytics ads. Additionally, the study found that JoJo: AdBlocker, unlike the control group and AdGuard, reduced RAM usage, indicating an efficient approach that improves device performance. Based on the data analysis, JoJo: Adblocker, a Google extension, appears to be a highly efficient instrument for blocking ads in Google Chrome. Moreover, JoJo: Adblocker can also help reduce RAM usage compared to AdGuard and browsing without an ad-blocker. Different approaches, such as machine learning, may be implemented to boost the ad blocker's efficiency and performance.

Keywords: Google Chrome, Ad-blocking, Effectiveness

Computer science & engineering

Digitalization of Canteen System as a Solution to Crowd Congestion in In-Person Classes

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This study addresses the issue of crowd congestion in traditional canteen systems brought about by the COVID-19 pandemic and proposes a solution through the digitalization of canteen operations. Despite attempts to regulate the flow of customers in General De Jesus College using a cafeteria system, significant crowd influx continues to be a problem. To mitigate this issue, the study developed a web application called "CTRL + Eat" that allows users to place orders online and reduce the physical presence of individuals in the cafeteria. An experimental-developmental research design was employed, and a CTRL + Eat WebApp simulation was conducted with twenty senior high school students. The findings indicate that the web application significantly reduced queuing and overall simulation time compared to traditional methods. The CTRL + Eat Web App demonstrated a 243.51% faster queue time inducing a 27.55% reduction in the total time spent on the buying process. Users perceived the web application as an effective solution for addressing crowd congestion and strongly supported its adoption. These results underscore the positive impact of technology-driven solutions in improving efficiency and customer satisfaction in canteen environments. Overall, the study concludes that the CTRL + Eat Web App is a viable and efficient solution for reducing overcrowding in canteens, particularly in the context of COVID-19. The digital canteen system ultimately offers a faster and more streamlined alternative to traditional canteen modalities.

Keywords: digitalization, canteen, crowd management

Computer science & engineering

A Filipino Sign Language (FSL) Software: Conversion of FSL to Text and Speech Using Deep Learning

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Sign language has become a crucial instrument for impaired people to communicate with others. However, the lack of knowledge and mastery regarding sign language became a major impediment in society, creating a communication barrier between impaired and non-impaired people. With this concept of a sign language translator, the observed language barrier for deaf-and-mute and ordinary people was addressed. The software provided translation corresponding to the presented hand gestures in front of the camera or monitor of the system. This study used two design methods: experimental and developmental approaches. The first phase in creating the project was planning the features, including understanding Filipino Sign Language (FSL) fundamentals. Then, programming module installation and code debugging were put into practice.

To ascertain the accuracy of the system in terms of sign and range, five gestures were tested. According to the testing results, the translation for each hand gesture/sign language was determined to be accurate. The average accuracy for each sign and the cumulative average for all signs were calculated and solved using statistical data analysis. The results in sign accuracy demonstrate that all gestures were successfully translated. The study also identified the different range accuracy: Range Accuracy (1ft), Range Accuracy (2 ft), Range Accuracy (3ft), and Range Accuracy (4ft). The range accuracy at a distance of 1 foot was accurately translated.

Similarly, the range accuracy at 2 feet is also perfectly translated. The system can scan signals from two feet away with pinpoint accuracy. However, in the range accuracy at a distance of 3 feet, only 98% of the ranges are accurate. With this result, the system could still translate the gestures almost perfectly. The distance of 3 feet is far from the laptop, but it can still translate FSL gestures.

Furthermore, with the range accuracy at a distance of 4 feet, the system translated every sign with an accuracy of 86%. This received the lowest percentage of range accuracy because it is explicitly stated that the percentage result decreases as your distance from the system increases. The system was able to convert FSL into text and voice. The range of the signer to the system affects its translation. On the other side, the system sign accuracy was perfectly translated.

Keywords: Filipino Sign Language (FSL), Sign Language Translator, Communication Barrier

Computer science & engineering

A Cost-Effective 6-Key Wooden Braille Keyboard for Visually Impaired Individuals

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This research study focuses on developing a low-cost 6-key wooden Braille keyboard designed for individuals with visual impairments in the Philippines. This research aimed to create a prototype using locally sourced and environmentally sustainable materials for its casing to ensure affordability. This was done as the existing braille keyboards in the market are often expensive in the Philippine economy, limiting their accessibility for those in lower income brackets. This study used experimental research as the method to procure information. It was defined as a study conducted with a scientific approach using two sets of variables. The first set was used to measure the differences of the second set. The independent variable in the study is the type of Braille keyboard used. The dependent variables will be the performance and accuracy of the keyboard when used by the participants. Additional variables to be considered in the analysis would be the ease of use, comfort, and satisfaction of participants. The six-key Braille keyboard was proven effective in outputting the intended characters. All the combinations entered correctly generated their respective characters in all the tests. Wood was tested as the keyboard structure and casing material over the usual materials used, like plastic and acrylic. Despite that, comfort and functionality were still shown. However, using wood instead of the usual materials for the keyboard structure and casing was heavier and bulkier. The developed six-key Braille keyboard was proven accurate and efficient through testing and evaluations. It was tested in a way that assessed its ability to transcribe inputs into braille characters as outputs correctly. Wood was also considered a viable alternative to the materials commonly used for making keyboards. However, it was noted that the keyboard's weight increased compared to the ones that do not use wood. It should be emphasized that the 6-key Braille keyboard prototype developed in this study is not intended to replace existing Braille keyboards available in the market. Instead, it aims to provide an affordable and accessible alternative for users who have previously encountered difficulties obtaining Braille keyboards.

Keywords: braille, assistive technology, keyboard

Computer science & engineering

Developing a Web-App Expense Tracker System Using Simple Programming Languages

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Managing funds and accounting has been a severe challenge for a long time. Until recently, the only answers were spreadsheets and checkbooks, but individuals are now less inclined to utilize them. The goal of this research is to assess the effectiveness and usability of the expense tracker system. This study was conducted using experimental research design by the researchers to assess the usefulness and accuracy of a web-application expense tracker in tracking financial aspects such as budget, income, and expense. The experimental research design is suited for this study since the researchers will be testing the web application's performance in auditing the user's financial situation. The results from this study showed that respondents are satisfied with the expense tracker features and functions but suggest improving its design and quality. Future studies should incorporate advanced features such as bank account linkage, internet transactions, and other functions. The research emphasizes simplicity, ease of access, and convenience, and the tracker is intended to be used in a workplace where items are expected to be stored snugly and neatly.

Keywords: Developing Expense Tracker, Programming Languages

Computer science & engineering

DENTAL MEDICINE

Formulation and Antibacterial Activity of Calabash (*Crescentia cujete*) Leaves as Herbal Mouthwash Against *Staphylococcus aureus*

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Theo Jonelle Nagayo
Sofhia Nicole Guape

Dental caries are considered a significant issue in the Philippines and other nations. Prior researchers have investigated the antibacterial properties of herbal plants to produce dental products; however, relatively few studies have focused on the Calabash (*Crescentia cujete*) leaves. Hence, this study was conducted to formulate *C. cujete* L. mouthwash and to evaluate its antibacterial effectiveness. The experimental design was utilized in carrying out the study as it was the most appropriate method needed by the researchers to gather data accurately. The researchers used the Mueller-Hinton agar to test the antibacterial activity of Calabash (*Crescentia cujete*) leaves mouthwash against an oral pathogen, *Staphylococcus aureus*.

Further, to test the comparative antimicrobial of Calabash mouthwash and commercially available medicine (Chloramphenicol). *Staphylococcus aureus* resisted the formulated Calabash (*Crescentia cujete*) leaves mouthwash. Meanwhile, the commercially available medicine (Chloramphenicol) was more effective in inhibiting the growth of *S. aureus* than the *C. cujete* leaves mouthwash. Researchers discovered that a herbal mouthwash prepared from Calabash (*C. Cujete*) leaves is inefficient against the oral bacteria *Staphylococcus aureus*. It does not affect the presence of *Staphylococcus aureus* in the mouth, plaque, or saliva. Furthermore, the Calabash (*C. Cujete*) leaf mouthwash is far less effective than the commercially available drug Chloramphenicol.

Keywords: mouthwash, calabash, efficacy, antibacterial

Dental Medicine

DEVELOPMENT STUDIES

Handmade Customized Crochet Cover of Aqua Flask Water Container

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Water bottles have grown in popularity as people have become more concerned about the environment and the importance of staying hydrated. However, there are few opportunities for customization, and most water bottles have conventional designs. Here's where handmade customization comes in. Water bottle coverings created from handmade crochet add a special, personalized touch while serving practical purposes like insulation and defense. Both a descriptive approach and a developmental method of research were used in the methodology of our study, which was designed using both of these approaches.

Additionally, the researchers used purposive sampling, and the 100 Senior High School students of General De Jesus College who participated in the study were given a set of questionnaires to collect the data required for the suggested product. This study discovered that Senior High School students in General De Jesus College frequently have problems with their Aqua flask water bottles, including the weight and scratch-proneness of the container. Researchers made a custom crochet cover for their water bottle container as a solution. The personalized cover gives their daily gear a personal touch and offers features like insulation and scratch prevention. The results of this study indicate that hand-made customization of commonplace items offers functional advantages and can enhance the user experience as a whole. The results stated that there is a need to develop a handmade crochet cover for the Aqua flask water container since Senior High School students frequently have problems with their Aqua flask, specifically to avoid scratches. And lastly, the findings of this study suggest that customizing everyday objects by hand has positive benefits.

Keywords: crochet cover

Development studies

Development of Papaya and Calamansi Soap for Sensitive Skins

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Millennials monitor their skin condition much more closely than those with sensitive skin. Mostly, it was believed that the higher the price of the soap, the better protection it gives. In this study, we explore all the possibilities with proven evidence and theories, with homemade papaya and calamansi soap being the wisest and more practical alternative for pricey skin care soap for people with sensitive skin. Both the descriptive approach and developmental method of research were used in the methodology of our study. Purposive or subjective sampling was used in which chosen respondents are to participate in surveys based on their own judgment. 100 Grade 12 ABM students of General de Jesus College were asked to answer the designed questionnaires dealing with their judgments about the products and their possible effects on their sensitive skin. Most of our respondents have sensitive skin, and they approved and satisfactorily agreed that our product, homemade papaya, and calamansi soap were advisable options. Aside from the positive skin care effect, the significant price difference was essential to their decision. The researchers found concrete proof that homemade papaya and calamansi soap is the best alternative for sensitive skin. They were convinced that price must not be the basis for skin care.

Keywords: Papaya and Calamansi Soap

Development studies

ECOLOGY AND ENVIRONMENTAL SCIENCES

The Feasibility of Kulitis (Amaranth) Leaves as a Bioplastic

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Plastics account for a significant volume of landfills around the globe and have a distressing impact on the environment despite the benefits they bring (Shamsuddin,2019). To address the problem at hand, one of the most widespread innovations in the plastic industry is the utilization of bioplastic, a polymer derived from renewable biological sources (Ashter, S.A., 2016). Kulitis (Amaranthus) is an abundant plant in the Philippines commonly used for consumption. Based on Sarker et al. in 2019, phytochemical analysis shows it is rich in starch contents. Starch is one of the materials mainly used for tensile strength reinforcement in the production of bioplastics (Arendt & Zannini,2013). This study aims to investigate the potentiality of Amaranth found in the Philippines to be used as a bioplastic. Amaranth leaves were collected, and the samples were boiled for 40 minutes. The leaves and excess water was blended to disintegrate the leaves before making the bioplastic for a finer product of film sheets. All the components, like Glycerin, cornstarch, vinegar, and tap water, were combined to create the bioplastic formulation. The formulated mixture for the bioplastic film sheet will be transferred to a silicon mold and sun-dried to create the film for approximately 8 hours or depending on the weather. A plastic tension test determined the tensile strength and maximum elongation or extension. A Biodegradability test was conducted by cutting the film and placed in the garage at room temperature. The result shows that the average tensile strength of Amaranth (2.02 N) is more significant than plastic labo (1.96 N) and starch-based bioplastic (1.92 N). However, plastic labo has the highest average extension load with 25.7 mm, followed by Amaranth bioplastic with 8.6 mm, while starch-based plastic has an 8.1 mm average extension load. Findings from the biodegradability test also show that the Amaranth bioplastic takes approximately 45 days to decompose and disintegrate. Using the Analysis of variance (ANOVA) for data analysis in tensile strength, data shows that Fstat (4.97) is less than Fcrit (5.15). Meaning there is no significant difference between the three treatments. This indicates that the Amaranth bioplastic is comparable to the quality of conventional plastic. Therefore, it can be concluded that the Amaranth bioplastic can be considered as an alternative to conventional plastics.

Keywords: Bioplastic, Amaranth

Ecology & environmental sciences

The Production of Bone Meal for Plant Growth and Development

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Fertilizer plays a significant role in increasing plant growth and yield. While numerous fertilizers promote rapid development, this study aims to provide a low-cost yet efficient fertilizer that will not affect the plant or the environment, unlike inorganic ones. The testing stage produced a noticeable increase in the development of the plant. This study aims to improve these results without having harmful effects. Purposive sampling is the type of sampling method used in this study. The researchers carefully selected the study's participants based on the objectives that would be beneficial in accomplishing the study's goal. The participants were chosen based on their prior experiences and ownership interests in plants. Participants in this study are owners of plants who use fertilizer to nourish their plants. Most of the selected respondents perceived that using organic fertilizer is often more beneficial than inorganic fertilizer. This may stem from most of our respondents being gardeners who do gardening as a hobby rather than a job. Still, these are significant findings, given that the results establish a need for bone meal fertilizer. Findings also entail that bone meal fertilizers are lacking in some nutrients that other fertilizers have but make up for it in terms of affordability and sustainability. Overall, higher levels of respondents agreed to use bone meal as fertilizer than inorganic fertilizer or chemical fertilizer. However, most respondents often used more commonly known organic fertilizers such as compost to maximize crop yield on a specific piece of land. The results show that Bone meal fertilizer has been proven to be a successful and long-lasting way to encourage plant development and improve soil fertility. High phosphorus and calcium levels stimulate root growth, enhance flowering and fruiting, and fortify plant structure. Bone meal fertilizer also serves as a slow-release nutrient source, giving plants long-term advantages while lowering the chance of nutrient runoff and environmental damage. For organic farmers and gardeners looking for a natural and environmentally beneficial solution, its organic nature makes it a recommended option. Using bone meal fertilizer can optimize crop yields and ensure healthy plant growth while being socially and environmentally responsible.

Keywords: Bone Meal, Fertilizer, Organic

Ecology & environmental sciences

Paper Production of Musa acuminata and balbisian (Saba) and its Effectiveness

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The researchers aim to study the banana peel as an alternative paper to explore sustainable and eco-friendly options for paper production. Bananas are widely available, and their peels are often discarded as waste. By finding a way to use banana peels to make paper, the researchers could reduce waste and potentially decrease the environmental impact of traditional paper production methods. Additionally, banana peel paper may have unique properties that make it worthwhile for specific applications. Overall, the purpose of the study would be to investigate the feasibility and potential benefits of using banana peels as an alternative paper source.

Peels from the Musa acuminata and balbisiana (Saba) plants were boiled at a high temperature for one and a half hours before being washed with tap water. The peels were put into the blender with 700ml of water, and the mixture was mixed for one minute to produce a pulpy consistency. 200ml of water was then added to the basin to thin down the pulp after it had been placed into a cloth and swirled for five minutes. The pulp was uniformly put onto a deckle on the paper mold. The pulp layer was transferred to a flat surface wrapped in damp fabric when the mold was elevated to drain the water. Using a sponge, the paper's water content was lowered and then compressed.

To reuse the paper fibers, the ink is separated using sodium hydroxide. The banana peel paper's hue is lightened using Zonrox. The paper made from banana peels is molded using a paper molder. Banana peel increases the strength of banana peel paper.

The researchers concluded that producing paper out of Musa Acuminata and Balbisiana (Saba) peel is possible using sodium hydroxide as a binding agent and a whitening formula. The number of hours and minutes spent blending the banana peels affects the consistency of the mixture and the number of hours left under the...

ECONOMICS

Challenges Encountered by Selected Street Vendors in Poblacion, San Isidro, Nueva Ecija, Due to Inflation

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Trisha Nina Yago
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Many people start street vending as it is one of the simplest business forms. However, being a street vendor comes with many challenges, and with inflation's effects, more significant problems arise. In this study, the researchers aimed to determine how Poblacion's street vendors were affected by inflation, identify their difficulties, and learn how they handled them. This study used a phenomenological research approach to examine the challenges and problems street vendors face as an effect of inflation. The researchers used the purposive sampling technique to select eight respondents who passed the criteria. The primary instruments used in this study were interviews and audio recordings. Based on the data of the respondents, the majority of them are struggling with the loss of income due to the rise in prices. Others have stated that they also experienced the loss of customers and the inability to increase their pricing.

Additionally, to overcome the problems, they had to raise their prices to earn a profit and were budgeting their expenses to handle the effects of inflation. In conclusion, the street vendors faced a lot of difficulties, including loss of income when they struggled to cover their expenses, which forced them to tighten their budget, loss of customers as they increased the price of their products led them to lose more profit, and the inability to increase their pricing due to the fear of losing customers that minimized their profit. Most respondents said they had to raise their prices or budget their expenses to handle the effects of inflation. The results emphasized better pricing and marketing strategies for street vendors.

Keywords: Street Vendors, Inflation

Economics

EDUCATION

Challenges Encountered by Selected Individuals with Disabilities in San Isidro, Nueva Ecija

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Tanya Buenaventura
Iverson Lemence
Justine Francisco
Edrick Donaire

People with disabilities (PWD) include those who have long-term physical, mental, intellectual, or sensory impairments. Their life experiences have been significantly impacted by the constraints imposed by living with these disabilities and the numerous difficulties and hurdles they have had to overcome. Concerned with this phenomenon, the researchers studied the challenges faced by selected individuals with disabilities in San Isidro, Nueva Ecija. The study used the phenomenological research method to analyze and evaluate the challenges faced by a group of disabled individuals in San Isidro, Nueva Ecija. The respondents in this study were five (5) individuals with disabilities (PWD), and pertinent information was gathered through semi-structured interviews. The researchers allowed time for unexpected events to occur while obtaining data, creating a welcoming and open environment that encouraged participants to share their personal experiences. This study's findings include the following as a result of the respondents' (people with disabilities) willingness to openly discuss the difficulties they have encountered as PWDs: frequent instances of discrimination, ongoing bullying, a lack of job opportunities, difficulty with transportation, and a sense of being a burden on their families. They also publicly acknowledged that their confidence in God, their values, and the love and support their families provide enable them to persevere in the face of hardship. Based on the findings, it can be concluded that some PWDs still encountered and experienced discrimination and other challenges due to their situation. However, it also highlights the significance of love and empathy for persons with disabilities as well as respect, a sense of belonging, and employment opportunities that cater to their needs so that they will have the sense of importance and significance that will enable them to participate in our communities and society as a whole.

Keywords: challenges, people with disabilities, impairments

Education

**Digital Age: An Analysis of the Influence of Ict in Humanities and Social Sciences (HUMSS)
Strand to Grade 11 and 12 HUMSS Students in General de Jesus College**

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Angeline Catalan
John Carlo Fernando
Nigel Kent Ovilla
Benj Patrick Ramos

In this age, students are avid users of digital learning. Hence, they must acquire the necessary knowledge and skills in applying ICT to sustain lifelong learning. This study tries to examine the various strategies employed by ICT teachers to enhance the skills of the students in Information and Communication Technology. This study utilized the descriptive method through contemporary educational theory to examine the influence of ICT on senior high school students in the Humanities and Social Sciences strand at General de Jesus College. It mainly focused on 185 senior high school students. The structured questions served as the basis for the survey questions. The results indicate that the strategies employed by ICT teachers in facilitating and enhancing the knowledge and skills of the students on the use of Google Apps, teaching ICT lessons, ICT tasks, educational motivation, communication skills, critical thinking skills, and academic achievements highly influence the learning of the respondents. The findings show that the ICT teachers effectively enhanced the respondents' learning in communication, collaboration, and resource sharing, resulting in improved student learning outcomes. The study also revealed that the ICT strategies used by teachers to improve the student's skills were perceived as effective and yielded positive learning outcomes.

Keywords: digital learnings, communication skills, technology

Education

A Phenomenological Study on Challenges Encountered by Selected Grade II Humss Students at General de Jesus College Due to Absenteeism

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Marc Joshua Cervantes
Crystal Jade Avenido
Markey Mallare
Aaron Clyde Miranda

Academic achievement is affected by various factors at the upper secondary level of education. Higher attendance is an immediate indicator of student academic development since poor attendance rates are associated with poor academic achievement. This study aimed to identify the challenges that the chosen Grade II HUMSS students at General de Jesus College faced due to absenteeism. The study included the causes of absenteeism and the strategies students employed to keep up with missed assignments or classwork. The phenomenological method of research was employed in the study. Ten (10) selected Grade II HUMSS students from General de Jesus College took part in the study, with several absences ranging from 10 to more than the number mentioned above of school days. Based on the findings, three (3) reasons were identified for absenteeism, which are (1) health, (2) family, and (3) motivation-related matters. Due to absenteeism, most respondents encountered problems such as poor lesson comprehension and missed classwork. To keep up with their missed class tasks, and assignments, most of them mentioned that seeking help and starting early was how they managed and dealt with it. The results of this study demonstrated how the underlying reasons for absenteeism significantly impact students' academic achievement at school. The respondents' challenges are primarily associated with the methods by which they coped with the challenges they encountered while establishing strategies for these concerns.

Keywords: Absenteeism, health-related matters, poor lesson comprehension, missed classwork, seeking help, starting early.

Education

Expenditure and Frugality: Allocation of Diurnal Allowance of Senior High School Students in General de Jesus College

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Ma. Editha Lopez
Lorenz Eduard Tangan
Lieca Nicole Mangilit
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The pervasive belief is that students tend to overspend and lack financial management skills. This study was conducted to find out how students distribute and allocate their allowance based on various factors like transportation, food, luxury and leisure, communication, projects or tasks, and savings expenses, which also reflects their views about responsible money management. The methodology used was the descriptive research method, applying the consumer theory. Students should learn to manage their allowances effectively by balancing their personal and academic expenses. It was decided to adopt simple random sampling, in which selected respondents were asked to participate in surveys based on their assessments. A questionnaire about expenditure and frugality (allocation of daily allowance) was given to 300 senior high school students at General de Jesus College. The results show that most respondents agreed that being careful or frugal in allocating their daily allowances for transportation, food, luxury and leisure, communication, school projects, and tasks is necessary. Thus, saving money little by little in banks has become one of their top priorities for emergency use and their future needs.

To sum up, the findings indicate that to budget their allowance properly, most respondents tended to prioritize their needs and necessities over their wants and preferences. The respondents expressed strong views on saving money rather than spending it inappropriately. These findings show how respondents develop frugal behavior as they learn to manage their allowances properly.

Keywords: Expenditure

Education

Development of Natural Eco-Friendly Lip Balm

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People who use lip balm regularly choose their own preferences in lip cosmetics disregarding many factors and only considering the product's availability. However, many studies have detected many problems, such as getting skin allergies and bringing adverse effects on the environment by using chemically-produced lip balms. In this study, we present the development of natural and eco-friendly lip balm with the sole purpose of ensuring the user's safety and for the betterment of the environment. A multiple-method design was used. Using a descriptive developmental design, we conducted online survey questionnaires with the Senior High School students of General de Jesus College, and 100 students responded to our structured questionnaires. Purposive sampling was also used as the selected sample who answered the criteria the researchers were looking for. After conducting an online survey through Google Forms, the researchers found that all our respondents use lip balm. The majority of our respondents use lip balm every day, and most were in favor were open to the discussion of developing an organic type of lip balm rather than a chemically-produced one. Most did not experience any harmful adverse effects from using lip balm.

Furthermore, the responses showed that they prefer to use lip balm in a biodegradable container. The researchers have found out that natural eco-friendly lip balm is preferred by many people more than a chemically-based one. The study shows that many lip balm users also consider their safety while using such lip cosmetics and the benefits that an organic lip balm can contribute to the environment. The study shows why developing a natural and eco-friendly lip balm is necessary and significant.

Keywords: Production, Clinical Evaluation, Natural Lip Balm

Education

Challenges Encountered by Selected Grade II GAS Students of General de Jesus College in Blended Learning and Its Impact on Their Academic Performance

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The COVID-19 pandemic has significantly impacted education in the Philippines, leading to implementing a blended learning program. However, blended learning brought different challenges that students encountered and affected their academic performance. This study aimed to present the challenges faced by GAS II students at General De Jesus College in the new form of learning, its effect on their academic performance, and how they handled the challenges encountered. A phenomenological type of research was utilized in this study. A total of ten (10) selected grade II GAS students of General de Jesus College are experiencing challenges in blended learning. According to the results, 1.1) the majority of the respondents who encountered challenges based on age were 17 and 1.2) in gender, the majority are male. Three (3) challenges they encountered identified a lack of adjustment, distraction, and a lack of socializing, which can affect their academic performance. Three (3) impacts are having low grades, poor understanding of the lesson, and missing activities. Four (4) students handle challenges to improve their academic performance by attending classes, contemplation, self-discipline, and time management. The adjustment was identified as the most common challenge in blended learning; other challenges are a distraction and a lack of socializing. As a result, the respondents faced challenges such as low grades, poor understanding of the lesson, and missing activities, along with the strategies employed to cope with the challenges and their impact by attending classes, doing activities when they have free time, self-discipline, and time management.

Keywords: Challenges, Blended Learning, Adjustment, Low Grades, Attending Classes

Education

Academic Weight Caseload: An Evaluation of Its Effects on the Sleeping Patterns of Senior High School Students in General de Jesus College

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Academic workload is considered one of the main stressors for high school students, as it has been shown to account for the less sleep they make. Hence, this study examines the effects of academic and extracurricular workloads on students' sleeping patterns and physical and mental health. This study used the descriptive method, utilizing the Cognitive Function Theory of Sleep, concentrating on how the sleeping patterns, physical and mental health, and academic performance of senior high school students of General De Jesus College were affected by their academic weight caseload. Structured survey questionnaires were given to three hundred (300) senior high school students chosen through simple random sampling. Most respondents stated that their sleeping patterns, physical and mental health, and academic performance were highly affected by the academic workloads, including quizzes and examinations, assignments, recitations and oral reports, and performance tasks. Due to these workloads, most of their time was spent on school work, primarily interfering with their sleep. The results indicate the need for the respondents to find the most efficient solution, effective time management so as not to hamper their sleeping time. Moreover, teachers must take effective interventions by only providing academic assignments that their students can fulfill to prevent students from being submerged in work.

Keywords: Academic Weight Caseload, Sleeping Patterns, Physical Health, Mental Health, Academic Performance, Interventions

Education

Knowledge and Understanding of Senior High School Students of General de Jesus College on Sexuality Education

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Due to the widespread misconception that sex education encourages students to engage in sexual activity, it is a complex subject to integrate into the curriculum. Its goals are to educate and learn about the cognitive, emotional, physical, and social elements of sexuality. This study aims to identify the knowledge and understanding of the respondents regarding sex education and how their level of knowledge influences their decision-making regarding sexuality. The descriptive method of research was used, applying social cognitive theory. The study employed simple random sampling to assess the level of knowledge and understanding of the respondents without biases. The questionnaire was administered to three hundred (300) Senior High School students at General de Jesus College. The results show that most respondents have an average knowledge and understanding of sex education. Therefore, their identities, values, morality, cultural and traditional beliefs, and the respondents' physiological information towards sex education disclosed that these factors primarily affect how they respond to and understand the topic of sex education, resulting in moderate knowledge and understanding. The results demonstrate the need of the respondents to develop further a deep knowledge and understanding regarding Sex Education that goes beyond only disseminating information about dangers, reproduction, and diseases by, including addressing constructive relationships and more enormous societal and gender implications on sexual and reproductive health, as well as happy sexuality and relationships, with a focus on acquiring life skills.

Keywords: Sex Education, understanding, Knowledge

Education

Factors Affecting the Career Choices of Selected Grade 12 Students in General de Jesus College

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The career choices of Grade 12 students are an essential aspect of their academic life as they will shape their future. The study investigated the factors affecting the career choices of selected Grade 12 students at General De Jesus College. The study includes themes such as personal interests, skills, practicality, financial stability, family and friend support, and patriotism. The research utilized a qualitative descriptive approach to gather data through interviews with selected Grade 12 students at General De Jesus College. The interviews were conducted using a semi-structured interview question to elicit responses from the students about the factors influencing their career choices. The collected data were analyzed using thematic analysis to identify the main themes and patterns. The findings of the study revealed that the factors affecting the career choices of Grade 12 students at General De Jesus College vary. The study found that Grade 12 students' career choices are influenced by various factors such as personal interests, skills, passion, and practicality. However, the main findings were that personal interest, pursuing one's dreams to create positive change, and having strong communication skills are significant factors in career decision-making. The study concludes that factors such as personal interests, skills, practicality, financial stability, family and friend support, and patriotism influence the career choices of Grade 12 students at General De Jesus College. The study's findings can be helpful for school counselors and educators to guide students in choosing their career paths.

Keywords: Factors

Education

Lived Experiences of Selected Grade II Students at General de Jesus College Who Grew Up Without the Presence of Their Biological Parents

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Parental care and guidance are critical components in fostering a child's skills. However, dual parenting may not be possible in some households due to various contextual variables. Unpredictably, parental instability of any kind will impair a child's growth. When a child grows up without their original parents, it can result in various physical and mental issues that will hurt them as they become adults. Thus, this study was conducted to determine the lived experiences of selected Grade II students at General de Jesus College who grew up without the presence of their biological parents. Phenomenological qualitative research was utilized in this study. A total of five (5) students participated in this study who experienced living their lives without the presence of their biological parents. The interview was conducted using a semi-structured interview to obtain responses from the students about their lived experiences growing up without the presence of their biological parents. The collected data were analyzed using thematic analysis to identify the main themes and patterns. The study found that the lived experiences of selected Grade II students at General De Jesus College who grew up without the presence of their biological parents experienced a lack of parental guidance and support, leading to mental and physical problems such as lack of self-confidence, anxiety, financial issues, and misbehavior. The results prompted the need for encouragement from their communities so that they could feel more confident in themselves and also constant love and support from their guardians despite not being their parents because living their everyday lives without having their parents to support them, nurture them, and give them their needs, was very hard for them as a child and a student, which can result in a variety of physical and mental issues that will harm them as they become adults.

Keywords: students who grew up without their biological parents

Education

Struggles of Selected Grade II Students at General de Jesus College Due to Academic Stress and Pressure that Affects their Scholastic Performance

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Researchers frequently provide an effective, commendable, and efficient research study. Despite the studies often provided, this problem remains prominent these days. This study explored students' problems due to academic stress and pressure and how it affects their educational performance. Ten were interviewed in this study from the Senior High School Department of General de Jesus College. To acquire accurate and specific information regarding this issue, phenomenological qualitative research design was used, and data was collected through semi-structured interviews accompanied by audio recorders, in which the respondents were selected through a purposive sampling technique. This paper discusses how students experience various struggles due to academic stress and pressure. Students reported that workload is the main reason for their stress and pressure and that they struggle with most by having sleepless nights. Most of the positive effect of this issue on the student is having high grades, while the adverse effect is low grades. Handling stress and pressure is by ranting to friends and social media, and the advice they give to other students is that they should have proper time management to handle stress and pressure effectively. The results contemplated the struggles encountered by the students due to academic stress and pressure. They emphasized the need for guidance regarding stress and pressure to maximize and handle certain situations.

Keywords: Academic, Stress, Pressure, Academic Performance

Education

Self Perception of ABM Students' in General de Jesus College Towards Their Academic, Social, and Emotional College Preparedness

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The benefits of being college-ready include preparing students for academic achievement, easing the transition to college life, encouraging personal growth and development, enhancing job readiness, and encouraging fiscal responsibility. Students may maximize their college experience, accomplish their goals, and build a solid basis for their future efforts by being prepared. This study examines how Grade 12 ABM students perceive their college preparedness in terms of academic, social, and emotional skills. The descriptive research method was employed in the study, utilizing the theory of readiness, focusing on four key dimensions students need to master to be considered prepared for college. These are vital cognitive strategies, content knowledge, and transition knowledge skills. Besides these academic skills, the study looked into the social and emotional preparedness of the respondents, who were the 210 selected Grade 12 ABM students of General de Jesus College. The structured questions were used to gather data and identify and examine the respondents' preparedness for college. The selected Grade 12 ABM Students participated in this study. The overall findings disclosed that the respondents were well-prepared for college. This indicates that to be successful and adequately prepared for tertiary education, the respondents believed they had to develop mastery of specific skills, namely: academic skills, social skills, and emotional skills.

Moreover, they perceived that these skills would serve as their foundation for college. The results reveal that the respondents recognize and understand the crucial roles of college preparedness to attain their goals. These findings provide valuable insights into the factors that contribute to college success. By addressing the specific problems that students experience, this study can support future senior high school students to know and understand the skills they need to master and acquire a strong foundation for college life.

Keywords: Academic, Social, and Emotional College Preparedness

Education

Rice and Cassava Flour: An Edible Alternative to Plastic and Paper Straws

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Pollution is one of the world's most significant problems, mainly plastic waste, which includes plastic straws. The researchers aim to reduce the use of paper straws, which are also detrimental to nature, considering that they could lead to deforestation. In turn, the researchers developed an edible straw made of cassava and rice flour as an alternative to plastic and paper straws due to the problems caused by the production of plastic and paper. This research investigation is descriptive developmental and will utilize a quantitative approach. The proposed study will undergo a three-stage Planning, Development, and Validation process. Out of 2,418 learners from General de Jesus College, the study will involve 343 respondents. Online surveys using Google Forms will be used to distribute the instruments. Slovin's Formula will be utilized to obtain a random sample from the population. Most people use plastic and paper straws around 2-3 times a week when drinking beverages. Most respondents think that the straws they use in drinking beverages are unsafe for both users and the environment and have considered buying an alternative edible straw. Most of the respondents believe that there is a need to develop edible straws as they are safer and help the environment. With that said, most were unfamiliar with the proposed product. If given a chance, most respondents can afford to pay more and buy edible straws for drinking beverages. Many respondents suggested lower pricing and more flavor and size variations for the proposed edible straws. The development of edible rice straws proved needed, accepted, and favored by the people. Further studies and improvements can be conducted on this topic and product, and investing in its research and production can lead to significant strides toward a more eco-friendly and responsible future.

Keywords: Edible, Eco-friendly Straws

Education

Academic Stress and Their Impact on Students' Depression Level and Academic Performance

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Today's students are concerned about examinations and other academic stressors, such as fear of lagging in their homework, writing assignments and reports, and working on individual and group performance tasks, examinations, and quizzes. Hence, this study determines why too much school work/activities lead to academic stress and identify their current stress relievers. To carry out the study, the researchers employed the impact of academic stress on the respondents' academic performance through descriptive research methods. It focused mainly on the 90 senior high school students in General De Jesus College. Structured questions served as the basis of the survey question, which was conducted online. The selected senior high school participated in this study to perceive the impact of academic stress on their academic performance and depression. The results revealed that academic stress had a high impact on the respondents' academic performance. This indicates that academic stress may often lead to depression and can affect their physical and mental health. Hence, they felt the need to find ways to be relieved from academic stress. The findings demonstrate the need for the respondents to balance their schoolwork and other personal activities to lessen academic stress, which was found to have a moderate impact on their academic depression. Moreover, the current stress relievers of the respondents, such as getting enough sleep, listening to music, and exercising, helped them to feel relieved and unburdened whenever they experienced academic stress.

Keywords: Academic Stress, Academic Depression, Academic Performance

Education

Factors Affecting the Procrastination Habits of Senior High School Students in General de Jesus College and Their Impacts on Their Physical and Mental Well-Being

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Justine Mina
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In school setup, procrastination is associated with a wide range of academic issues, such as worse exam scores, worse grades, repeated assignments, increased course failures, increased course withdrawals, longer study duration, and an increased likelihood of dropping out rather than graduating. This study examines the procrastination habits of senior high school students and how these affect their performance. This study used the contemporary education theory's descriptive method to analyze their responses and experiences. It mainly focused on 185 senior high school students of General de Jesus College using the simple random technique. The structured questionnaire and surveys served as the basis for the survey question. The results disclosed the factors why the respondents procrastinate. Among these were the lack of skills to finish their academic tasks, poor time management, inability to handle pressure, and lack of motivation to carry out school work. These factors were found to have affected them physically and emotionally, as they ended up feeling exhausted and overly anxious over exam results, reports, and projects resulting in low grades and, to the worst, failing grades. The respondents' procrastination effects were evident as they were likely to suffer the negative consequences concerning their careers, studies, health, and personal lives. This procrastination habit may prevent them from succeeding and developing their personality. Hence, there is a need for them to make the best decision towards avoiding or overcoming procrastination.

Keywords: Procrastination, Academic Performance, Students

Education

The Link Between Social Media and the Fear of Missing Out of Senior High School Students of General de Jesus College

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Fear of missing out (FOMO) is a sensation experienced by people terrified of missing out on activities and is linked to various undesirable life situations and sentiments. This study aims to determine the possible relationship between social media and fear of missing out (FOMO) among the senior high school students of General de Jesus College. This study employed a descriptive research method, utilizing the Self Determination theory. Simple random sampling was used. Three hundred forty senior high school students of General De Jesus College completed a self-reported questionnaire that included measures of fear of missing out and social media exposure. The results indicate that most of the respondents spent a significant amount of time on social media, which may be linked to their fear of missing out, affecting their mental well-being, social interaction, academic performance, productivity, and physical well-being. Based on the findings, there was a link between social media use and fear of missing out. The number of social media accounts used and the amount of time spent on them became an indicator of FOMO. The longer the exposure to social media is, the higher the chance they fear missing out. Also, the higher number of social media they possess specifies that they are more likely to check in for updates, so they would not fear missing out. These actions may result in feeling lonely, which can also hamper their academic performance and well-being.

Keywords: Fear of Missing Out, Social Media, Mental Health, Social Functioning, Physical Well-being, Academic Performance, Strategies and Interventions

Education

Academic Difficulties Encountered by Second-Year Accountancy Students in General de Jesus
College School Year 2022-2023

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Mariel Horlina
Jonalyn Velasco

The second year accounting students are mainly experiencing difficulties in their academic performance, are pressured on how they will meet the standard of their professor, and are worried about their grades. This study explains why accounting students have difficulties. A descriptive design was used for this study. To determine the difficulties the second-year accounting students encountered and its possible solution. Descriptive research is the research design in which data is collected qualitatively and analyzed using quantitative procedures. Pertinent data were obtained through a questionnaire. The sampling used was total population sampling. Most of the respondents are female. Peer pressure is a significant challenge for accountancy students, and professors who provide clear instructions and guidance can positively impact accountancy students. One of the reasons accounting students fail their major subjects is inadequate time management, which presents a significant problem. Peer pressure is a major issue for accounting students. If they work in groups and support one another, it can positively affect their academic achievement.

Keywords: Academic performance, Accountancy students, Peer pressure

Education

The Impact of Social Media Usage on Effective Communication Skills of Senior High School Students

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Tristan John Santos

Technology has been improving quickly these past few years, becoming necessary for daily needs. Social media has been more than just for entertainment. It is used as an easier and faster way to communicate. This is why this study aims to determine the impacts of social media on the respondents' communication skills and how it affects other aspects of their lives. The descriptive method of research was used, which applies social cognitive theory. The study also applied the simple random technique. Questionnaires were administered to 118 senior high school students in General De Jesus College. The results showed that most of the respondents agreed that social media affects their communication skills, no matter the different factors, such as the respondents' visual skills, writing skills, and social communication skills are affected by social media usage. Too much social media usage may lead to losing confidence regarding face-to-face communication skills. The results concluded that the respondents need to manage their screen time or social media usage, as it may adversely affect their communication skills, especially regarding social communication skills. It produces positive effects for others, but some become too reliant on their devices. To achieve practical communication skills, it is necessary to manage the time that should be spent on social media communication and the time that should be spent on face-to-face communication.

Keywords: Communication Skills, Social Media Usage, Social Behavior

Education

ENGINEERING

Production of Pelton Water Turbine Generator Using Recycled Materials

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This study aims to pursue the Pelton water turbine generator as a source of electricity. This research aims to develop an alternative source of electricity during power outages in rural places and places where power outages occur most of the time. This research aims to provide insights and information about generating a Pelton water turbine generator made of recycled materials. It uses experimental methods to gather the data and information to conduct this research. Trials and errors are made in the testing to gather the essential details needed, such as testing light bulbs and measuring the dc motor's power output using a multimeter. The outcome of the testing turned out fine. All the data that is needed was gathered and collected. The output of the dc motor averages around 5-8 voltages. The 12 volts dc motor successfully powered the 12 volts ac light bulb and a dc light bulb that is also 12 volts. Using Recycled Materials, the Pelton Water Turbine Generator demonstrates the potential to generate a range of electrical power, utilizing water flow to rotate a PVC tube-based propeller. Its output is adequate to power light bulbs in specific rural households, providing an alternative power option during power outages.

Keywords: Recycled Generator, Water Generator, Recycled Pelton Turbine Generator

Electrical & telecommunications engineering

Killing Watts Using Smart Watt Meter

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“Phantom Load,” a phenomenon in our modern world, causes energy waste in homes and the whole environment. The researchers innovated a Smart Watt Meter that automatically kills excess electricity which we call phantom load, when an appliance is on standby. Using convenience sampling, we conducted that focused on household appliances that have phantom loads. In measurement testing, we compute the average kilowatts the appliances consume while on standby mode using the formula $p = (z)(t)$. Collecting data is also conducted, with data collected through experiments and observing the outcomes. The power consumption of the appliances with a phantom load that used the bright watt meter was cut off using a relay and therefore showed no power consumption afterward. The temperature of the room and the devices and appliances also affected the measurements of the watt meter and also showed to consume more power compared to using the appliances in lower temperatures. This paper aims to present our team's effectiveness when it comes to automatically detecting and eliminating unnecessary power consumption in homes using Arduino Uno R3 and other electrical components to help reduce greenhouse gas emissions and save on electricity bills.

Keywords: Phantom Load, Smart Watt Meter, Eliminating Phantom Load

Electrical & telecommunications engineering

The Effectiveness of High-Pressured Water-Powered Generator as a Supplementary Source of Electricity

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This study aims to show the effectiveness of a high-pressure water-powered generator as a supplementary source of electricity as most of the population struggle during a power outage. This study could be used as a supplementary source of electricity. Since hydropower only relies on the pressure to be used daily. A hydro-powered generator, one of the oldest and most significant renewable energy sources, uses natural water flow to generate electricity. The primary purpose of this study is to find the effectiveness through experimental research. Several testing is conducted in this research. For a hydro-powered generator to produce electricity it uses the water pressure entering a household through a tube connected to the meter of the house and the tube connected to the device, the water pressure drives the hydro turbine blades, creating spinning forces that the generator then converts to energy—use of water pressure powered generator to build a supplementary source of renewable energy in households. The minority of the experiment trials indicate that the power required for running a light bulb that could be utilized as an alternate source of electricity comes from the high water pressure. The result shows some errors in the trial. Based on the significant finding of the study, it concluded that the high-pressure power generator is effective. However, it still encounters minor problems based on the research encounter lack of material trial. In addition, the project still shows its effectiveness. It serves as a light source during significant power outages or disturbances. Based on the experiment's results, high water pressure provides the energy needed to run a light bulb, which could be a backup source of electricity. The materials, design, and durability were necessary for the hydro-powered generator to be established and to function accurately. The variable that affects how well the generator produces energy mainly depends on the pressure of the water. High pressure water is a reliable light source in the event of power outages or disturbances, as it is sustainable and can be replenished.

Keywords: Hydropower, High-pressure power generator, Household supplementary source of electricity

Engineering

Efficiency of the Alternative Hydroelectric Generator in Irrigation

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Despite the improvements in access to electricity, the Philippines still has a rising issue with energy insecurity, and Nueva Ecija was one of the provinces experiencing constant brownouts. Therefore, a renewable electric generator is one of the visible solutions to power shortages. In this study, the researchers created a hydroelectric generator with a capacitor as a renewable energy source. The main goal of using capacitors or voltage regulators in the hydroelectric generator is to maintain steady-state voltage levels in the system at acceptable levels. This led the researchers to consider adding a capacitor. A design with several ways was applied. The researchers focus on developing a hydropower generator using an experimental and developmental design approach. This approach was used in the current study since it involves a hypothesis, variables that can be measured, and controlling factors. Participants in the research perceived significant issues with the hydroelectric generator innovation, primarily stemming from technical performance and variable energy output. The generator achieved an average of 6.098 Volts, 3.13 Amperage, and 19.09 Watts, sufficient for powering household devices. The findings offer valuable insights into the efficiency of hydroelectric generators in irrigation, highlighting their potential as sustainable energy sources and contributing to understanding generator performance, water velocity requirements, and the role of capacitors in energy stabilization. Research findings have exhibited notable progress in hydroelectric power generation, as evidenced by a maximum output of 18 volts per minute. Hydroelectric generators rely on the flow of water to generate electrical energy by employing a turbine to capture the kinetic energy and a linked generator to transform it.

Keywords: Hydroelectric Generator, Capacitor, Irrigation

Engineering

Performance of a Modified Grill Thermoelectric Generator With Iced-Based 'Samalamig' Cooling System

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Aldwin Lopez

Electrical and electronic education researchers and inventors continuously develop different renewable energy resources. Thermal heat is what they have found to be one of the possible sources throughout their thorough experiments and discoveries. From the fundamental knowledge of thermally powered electric generation, the concept and unique design of a grill thermoelectric generator that uses 'samalamig' as its cooling system came to light. In this study, we experimented with and tested its performance in producing electricity voltage, supported by related studies, evidence, and theory. Utilizing the developmental and experimental research designs, the researchers produced a grill thermoelectric generator utilizing an aluminum plate as heat transfer with an ice-based 'samalamig' drinks cooling system in a stainless steel pot. The researchers then tested and measured the temperature difference, voltage output, and the temperatures of the final product's heating and cooling systems for 2 minutes with 15 seconds intervals to arrive at a more accurate result. With an average temperature difference of 18.9°C, the generator produced an average actual voltage output of 7.65 volts and reached an average of 24.46 volts with a booster regulator. And while the ice-based 'samalamig' cooling system hovers around its average at 19.35 °C, transferring heat by the aluminum plate loses heat at an average of 24.78°C. These results showed that while the stainless steel pot as a container for the ice-based 'samalamig' cooling system was effective and efficient, the aluminum plate still lost significant energy. Despite that, the generator gathered enough temperature difference to produce electricity for powering small appliances.

Keywords: Grill Thermoelectric Generator, Effectiveness

Engineering

Design and Development of the Use of Solar Panels With a Dual-Axis Sunlight Tracking System for Improved Solar Energy Harvesting

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Reginald Salvador
Paolina Francheska Gaddi

The prevailing method for collecting energy involves the use of stationary solar panels. However, this approach has limitations as the panels are fixed, lacking adjustability and mobility. Additionally, the amount of solar energy this approach captures depends on the intensity of sunlight, which varies due to the sun's movement across the sky. This study aimed to design and develop a solar tracker for improved solar energy harvesting. This paper used multiple methods, such as experimental and comparative analysis research design. A 5-hour testing was conducted for two consecutive days to determine the significant differences between the dual-axis solar tracker and a fixed solar panel in harvesting energy. After two days of testing in sunny and cloudy weather conditions, the developed dual axis solar tracker was 5.03% more effective at voltage generation than fixed solar panels.

The study also found that efficiency is significantly better on sunny days, and productivity is lower on cloudy days due to the decreased sunlight. Voltage gain is also increased during peak hours of the day. At 2:00 PM, the tracker was found to have produced 28.01 at its highest and 11.8 voltages at its lowest. The fixed panels produced 26.22 (10.54 at its lowest) for comparison. The findings revealed that the dual-axis solar tracker can significantly enhance overall performance compared to the fixed system and that the efficiency is significantly better on sunny days than on cloudy ones.

Keywords: Solar tracker, Dual-axis, Energy Harvesting, Efficiency

Engineering design

ENVIRONMENTAL HEALTH

The Effectiveness of the Mosquito Repellent Hand Sanitizer

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Gio Gajasan

The research study examines the viability of leaves and Peppermint leaves as mosquito-repellent hand sanitizers. The research will use the leaves of Peppermint as the independent variables for the study. It will be subjected to specific processes such as phytochemical analysis, collection of materials, preparation and variables, treatment formulation, sanitation of independent variables, identification and precise measurements, combination and molding, application of treatment, data collection, cost analysis, data analysis and interpretation to arrive at the finished product. The final output is the dependent variable which will be compared to the controlled variable, involving the mosquito repellent hand sanitizer. The researchers used the experimental type of research. Experimental Research is a comparative analysis in which you study two or more variables and observe a group under a specific condition or group experiencing different conditions. By assessing the results of this type of study, you can determine correlations between the variables applied and their effects on each group. Experimental Research provides more information when making professional decisions, which might allow you to complete better and more profitable actions. This study finds that Peppermint can repel mosquitoes and decrease the risk of possible diseases that a human can get from mosquito bites. Upon examination of the result, it was discovered that the researchers' hand sanitizer has a lot of effectiveness compared to a mosquito bite. It is still crucial to utilize a hand sanitizer that repels mosquitoes. Combining alcohol and water reduces skin irritation, while peppermint is a natural repellent.

Moreover, xanthan gum maintains the stability of the mixture while glycerin functions as a moisturizer, keeping the hands supple. As stated by Borysiewicz (2009), prevention is better than cure, and we can significantly impact the numerous afflictions that plague humanity today. Although restating the vision may seem simple, executing it has proven to be a considerably intricate and challenging undertaking.

Keyword: Repellent, Sanitizer, Peppermint

Environmental health

The Effectiveness of Using Thyme, Rosemary, and Oregano as a Perfume Repellent Spray

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This research comprehensively analyzes the advantages and disadvantages of using fresh thyme, rosemary, alcohol, and oregano as a perfume-repellent spray. The researchers will provide the essential parts and highlight the obstacles, problems, and errors that the researchers have encountered during the experiment. This will show how this product will benefit everyone and how the researchers can provide a better solution to solve the problem that the researchers encountered. Accepting criticism from other people will help the researchers to study hard and enhance the product even more. This will help both the researchers and the consumers to know how this product can possibly help them. In this part, the researchers will be able to show you how their product managed to help people to live their life without getting scared of going out because they have a product that they can use that can provide safety against mosquito-borne illnesses. This will show how effective this product can be. In this part, the researchers will be able to show in this paper how this product obtained the perfect prototype despite the trials and errors that the researchers encountered during the experiment. In the first trial, their first vial became watery, the second vial became less fragrant, and we learned the almost perfect prototype in the third vial. Lastly, on the final try, the researchers finally created the perfect prototype by knowing each ingredient's exact amount and measurements. The researchers concluded that combining the ingredients such as thyme, rosemary, and oregano delivered protection against mosquitoes. The perfume-based component made it easier to use because of its dual function. Because of the natural ingredients used in making the perfume, the scent tends to last more because of the natural ingredients used in making the product. Unlike the lotions sold in stores, where applying insect repellent might be difficult, this method is more accessible. The perfume was less overpowering to the nose and dissipated into a light aroma that lingered all day.

Keywords: mosquito repellent, oregano, perfume

Environmental health

The Effectivity of Using Coconut Coir and Banana Stem (Pseudostem) as a Paper Bag

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Nowadays, professionals are beginning to find alternative solutions to the social issue called plastic waste pollution because of the continuity of its harmful effect on biodiversity. People continue to have different diseases because of plastic's environmental harm. Researchers have studied that paper bags are way better than using plastics. Still, the typical paper process called "the pulpwood-making process" is harmful because it carries pollutants that may damage biodiversity. In this study, the researchers will focus on using waste plants of coconut coir and banana stem to develop a paper bag that is way healthier and environmentally friendly. The researchers conducted this study using an experimental method. The product was made from banana stems and waste coconut coir. The product was made with the help of a deckle which serves as the mold to form the paper. For the paper to be solid and durable, sodium hydroxide (NaOH) was used to leave the component alone, strengthening the product. The coir supports the paper to be in strength, leaving it with its rough texture. The banana stem's properties help the paper to be tucked with the product. Researchers have studied that banana stem and coconut coir fiber contain pulping properties that help to form a paper. The sodium hydroxide removes the other products that weaken the paper. For it to be more, the drying process was done with the help of sun rays, leaving it with no chemical use for it to be environmentally friendly. The whole making process of this product takes a day and a half to be finished and formed.

Keywords: Coconut coir, Sodium Hydroxide, Banana Stem

FINANCE

Spending Behavior of Selected ABM Senior High School Students in General de Jesus College

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Students' spending habits are vital in shaping their long-term financial well-being. This research aims to provide insights into the spending behaviors of ABM senior high school students and identify key determinants that influence their financial choices in life. A descriptive research method was employed, utilizing the planned behavior theory. A structured questionnaire as the primary data collection tool was applied. A simple random sampling technique was administered to 204 students from senior high school ABM Strand in General de Jesus College. The questionnaire assessed spending habits for food, personal needs, academic needs, transportation, leisure and relaxation, and saving habits. The selected senior high school ABM students participated in the study. The overall findings revealed the respondents had somewhat good spending habits in discretionary spending, savings habits, impulsive purchases, and the prioritization of needs versus wants. The findings highlight the need for targeted interventions to improve spending habits further and promote responsible spending habits among senior high school students in schools. By addressing students' specific challenges, this study can provide guidance and support to empower them to make informed financial decisions. Ultimately, this research seeks to improve the financial well-being of senior high school students and equip them with the necessary skills to navigate the complex financial landscape they will encounter.

Keywords: Spending Behavior, Saving Habits, Budgeting

Financial analysis

Financial Management Practices of Selected Sari-Sari Stores in San Isidro, Nueva Ecija.

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Small and medium-sized businesses (SMEs) are crucial to our economy because they help generate revenue, wealth, and jobs. This study aimed to examine the financial management practices of selected Sari-Sari stores in San Isidro, N.E., and explore how these practices can be improved to increase the chances of success. The study aimed to contribute to the existing body of knowledge on the financial management practices of small businesses in the Philippines. The study used a descriptive research design to examine the financial management practices of Sari-Sari stores in San Isidro, Nueva Ecija. This design enabled the researchers to describe and analyze the financial management practices of selected Sari-Sari stores. The participants of this study were the selected Sari-Sari store owners in San Isidro, N.E. A purposive and convenience sampling technique was used to select participants who met the criteria of owning and operating a Sari-Sari store. The data was collected through semi-structured interviews with open-ended questions. The interview questions were designed to elicit information on the financial management practices of the participants, such as their record-keeping methods, sources of financing, and strategies for managing their cash flows. Sari-sari store owners faced different challenges in their business, such as paying monthly and daily bills and expenses, high competition, and dealing with expired products. Respondents allocate a percentage of their daily sales for future investment, bill payments, or emergencies and price their products competitively to address this. Bookkeeping is widely used, and cost-cutting measures such as buying only necessary items and managing product expiration are employed. The majority of the respondents have been running their business for 1-10 years, and the most common encountered challenges in financial management practices are that they have to pay their monthly and daily bills and expenses and that they count the total sale of the day after they close and take a percentage of it to save it for themselves, for future investment, to pay the bills or for emergency cases. The majority of the respondents are not loyal to their suppliers. The recommendation for aspiring entrepreneurs looking to operate their sari-sari stores is; the importance of patience and perseverance, comprehensive business planning, purchasing cheaper but quality products, and effective financial management.

Keywords: Sari-Sari stores

Financial analysis

FOOD SCIENCE AND ENGINEERING

Goosegrass Flour: An Alternative for Wheat Flour

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Flour is a finely ground powder prepared from grain or other starchy plant foods and used in baking. Since wheat is a common ingredient in flour-making, we decided to use another type of wild grass, which many people think is not edible and is just a parasite on their farm or garden, goosegrass. We made this decision because goose grass is usually seen on dump sites, road sides, farms, and anywhere else and has medicinal aspects. The purposive sampling technique, also called judgmental or expert sampling, is a type of non-probability sampling with the primary objective of producing a sample that can be logically assumed to be representative of the population. From the word itself, purposive sampling is done by purposely selecting the respondents based on their expertise. The researchers use purposeful sampling because it is the most applicable method for this study. The researchers agreed to use questionnaires over other methods to see respondents face-to-face and to facilitate an easier understanding and interpretation of the data gathered. Most respondents agreed that there is a need to produce Goosegrass flour for the market that can have medicinal traits simultaneously. Since it can be found on roadsides and backyards, it is easy to collect and manufacture that flour made from goosegrass. Aside from that, most of them want to try an alternative flour not made from wheat when it comes to baking. Overall, there is a need to produce Goosegrass flour. The researchers devised a way to manufacture flour that can substitute for existing flour made of its usual ingredient, wheat. Flour can offer a variety of traits compared to the existing ones. Goose grass is a safe, healthy, and medicated grass made into flour to provide a tasty and healthy consumption.

Keywords: Wheat Flour, Goosegrass

Food science & engineering

The Effects of a Tea Made With Black Tea Leaves (*Camellia sinensis*), Hibiscus Flower (*Hibiscus sabdariffa*), Cardamom (*Elettaria cardamomum*), Camu-Camu (*Myrciaria dubia*), Chlorella (*Chlorella pyrenoidosa*)

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The consumption of tea has been a long-standing tradition in many cultures around the world. Beyond its cultural significance, tea is often recognized for its potential health benefits, including its antioxidant properties and potential positive effects on various aspects of human health. There has been growing interest in developing tea products infused with vitamins and minerals in recent years, aiming to enhance its nutritional profile and provide additional health benefits. Experimentation was employed, and the research was conducted at a residential location. The tea was prepared using tools such as a kettle, teacups, mortar and pestle, and specific materials, including water, dried hibiscus flower, ground cardamom, camu-camu powder, chlorella powder, and stevia powder. Data was gathered through observations and tests conducted on a lab rat to evaluate the tea's impact on energy levels and digestion. The results revealed that consuming vitamin and mineral-infused tea had notable effects on specific aspects of health. The lab rat exhibited increased energy levels and enhanced digestion, as evidenced by more frequent bowel movements.

Additionally, one of the lab rats who only took tea had more immunity than the other rat who was given water and got a cold. Based on the findings, it can be concluded that vitamin and mineral-infused tea has potential health benefits, particularly in improving digestion and energy levels. The positive effects observed in the lab rats align with the existing literature on the benefits of tea polyphenols and fruit extracts. Further research is recommended to explore the long-term effects and optimal dosage of vitamin and mineral-infused tea on human health.

Keywords: Tea, Health Benefits, Vitamin and Mineral-Infused Tea, Nutrient Content

Food science & engineering

HEALTH SCIENCES

Effectiveness of Shampoo Made With Musa (Banana), Fragaria x ananassa (Strawberry), and Citrus limon(Lemon) To Prevent Dandruff and Itchy Scalp

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This research aims to study the advantages of shampoo made with banana, lemon, and strawberry for dandruff and itchy scalp, highlighting these ingredients' benefits. Having excellent, healthy hair has become more popular. Everybody struggles when they have dandruff. Small bits of dry skin that have flaked off to the scalp might cause the scalp to be itchy at any moment without endangering people's hair. The researcher discovered justification for starting the process of creating fruit-based shampoo. Many people, such as teenagers, must be aware of how crucial this product is to learn what can be done if they experience hair or skin issues. The primary purpose of this study is to determine the effectiveness of shampoo made with citrus, banana, and strawberry. This study will utilize the scientific method. The scientific method is a technique that uses testing and experimentation to determine facts objectively. The fundamental steps include making an observation, formulating a hypothesis, making a prediction, carrying out an experiment, and evaluating the outcomes. The result of the Effectiveness of strawberry, banana, and lemon to prevent dandruff and itchy scalp. Two people and two dogs were used in the study. The product was smooth and gentle on the hair. Furthermore, the researcher applied shampoo on the skin to see the effect. When shampoo is used on a person's skin, it is slippery and silky. The testing has no adverse effects on dogs and human hair, and it has a lasting aroma. The mixture of combined fruits such as strawberry, banana, and lemon is effective to lessen or prevent dandruff. When the researchers tested the shampoo on two dogs and two humans, there was no adverse effect, and it had a lasting aroma. Having fresh and natural ingredients helps the hair to be more silky. The mixture is also foamy, even if you only put it a little while using it. The scent of the mixture is long-lasting and has a natural and fresh scent.

Keywords: Shampoo, strawberry, banana, lemon

Health and Science

All-Natural Facial Wash: Aloe vera, Calamansi, and Basil

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Skincare products, including facial wash, are essential for maintaining healthy skin. However, concerns about chemicals in skincare products have led people to seek natural alternatives. This study aims to develop an all-natural facial wash using aloe vera, calamansi, and basil to provide a safer, more sustainable option that meets consumers' needs, expectations, and standards-seeking chemical-free products. This quantitative study employed a quantitative research approach, specifically descriptive-developmental methodology. Researchers utilized two structured questionnaires, the Needs Assessment Tool and Evaluation Tool, distributed to the respondents through random sampling using printed questionnaires and online forms. Two hundred thirty-three respondents from the ABM, STEM, HUMSS, and GAS of General de Jesus College strands participated. The significant findings revealed that most respondents (93.56%, n = 218) expressed needing an all-natural, safe, budget-friendly facial wash and an alternative to chemical-based products. Also, respondents who identified the need provided recommendations for the desired product: It should be gentle, mild, safe to use while still being practical, suitable to all skin types, budget and environmentally friendly, it should be in liquid form, and it should be well prepared and packaged. The study highlights the need for an all-natural facial wash due to concerns about chemical-containing skincare products' safety, risks, or adverse effects. The proposed all-natural facial wash, aligned with consumer expectations, aims to meet the need for a safer and more sustainable skincare option by adhering to recognized certification standards for natural and organic cosmetics.

Keywords: All-natural facial wash, Skincare, Aloe Vera, Calamansi, Basil, chemical-free

Health and Science

Effectiveness of Lavender, Hibiscus, and Tea Tree as Soap Tick Repellent

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In this research, though, we will focus on ticks. It is of vital importance to learn more about ticks so we won't be caught unprepared. Among ectoparasites, ticks are very important and harmful blood-sucking external parasites of mammals, birds, and reptiles worldwide. Ticks are parasites that feed on warm-blooded hosts by biting them. A tick bite can infect humans and animals with bacteria and viruses. The fundamental reason for this research study is to conduct a product showing the effectiveness of lavender, hibiscus, and tea tree oil as a tick-repellent soap. This study will serve as a field for new insights into using natural products, promoting health and environmental knowledge. The researchers conducted the study through experimental and observation methods. All the ingredients used are natural and purchased online, and the molder used you can find at home. The researchers tested the product on dogs with ticks two times and observed what happened after using it. As a result of our experiment and observing it for three days, we noticed ticks falling already, dying, and drying up because of the anti-tick soap we used. These results show that the natural ingredients have the potential as a natural alternative for killing ticks that causes bacterias and viruses in dogs.

In conclusion, employing natural constituents in the manufacture of anti-tick soap has a favorable impact on dogs, as it entails the utilization of ingredients such as lavender, hibiscus, and tea tree procured through uncomplicated methods that maintain their innate properties. This approach omits the utilization of certain synthetic chemicals, including pesticides and growth hormones. An assortment of additional compounds is requisite in formulating efficacious shampoos or conditioners, such as cleansing, emulsifying, moisturizing, and antimicrobial agents.

Keywords: Tick Repellent, Soap, Hibiscus

Health and Science

LEGISLATION

Depletion of Privilege: College Students' Stance of General de Jesus College on Third-Sex Marriage Legalization

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Same-sex marriage has been a contentious issue for a long time. Various sources, such as the household, school, peers, media, and spiritual organizations, might comprise details on same-sex unions essential to college students' awareness of its potential legalization. This study was conducted to determine the stance of the college student respondents on whether the proposed same-sex marriage may be possibly legalized or not. The descriptive research method was utilized, applying Utilitarianism Theory, wherein two hundred (200) college students at General de Jesus College were questioned using survey questions. Hence, simple random sampling was used, in which respondents were randomly chosen and requested to participate according to their initial evaluations. The results show that the majority of respondents' perspective are highly influenced by their religion, morality, and culture, which urged them to oppose the legalization of same-sex marriage; thus, environmental factor affects their cognitive stance positively. The findings highlight the factors such as religion, morality, and culture to the respondents regarding opposition to same-sex marriage legislation. Thus, it is evident that the respondents still uphold the value of the sanctity of marriage, that is, the union of a man and a woman alone.

Keywords: Same-Sex Marriage Legalization, Stance, Depletion of Privilege

Legislation

MARKETING

Marketing Strategies of Selected Clothing Business Owners in Gapan City

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The development of clothing businesses over the years has seen a path to improvement, and it is because of those challenges that they were able to develop marketing strategies they can use. By determining their experiences of clothing business owners in Gapan City, Nueva Ecija. The study aims to identify the strategies used, the reasons behind their implementation, and how they are constructed and utilized. With the emergence of new generations, most respondents rely on promotion to sell their products. Also, A phenomenological research method was utilized to gain a deeper understanding of the experiences of ten clothing business owners. This study aims to identify the marketing strategies used by clothing business owners on how they construct them. Face-to-face interviews were conducted, and audio recordings were used. The researchers used smartphones to ensure the accuracy and fidelity of the data collected. The study showed that despite changes in marketing trends, they provide high-quality products as their marketing strategies. Lastly, lowering the product's price as their promotion strategy helps them to sell their product effectively. However, the respondents have challenges, particularly having a customer with a negative attitude. Some customers demand too much to lower the product's price, and sometimes they do not talk properly.

Moreover, many competitors selling similar products at lower prices was another problem that the clothing business encountered. On the other hand, implementing these marketing strategies increases clothing businesses' income and sales. It was revealed in this study that clothing business owners in Gapan City use marketing strategies such as promotion, providing high-quality products, and low pricing. Clothing business owners faced several challenges while developing their marketing strategies, such as customers' negative behavior and increased competition. Participants highlighted successes in using these strategies to increase their income and sales.

Keywords: Marketing Strategies, clothing business

Marketing

The Phenomenological Study of San Isidro's Beverages Managers Who Use Digital Marketing

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Digital marketing is one of the most used strategies, such as in coffee shops or milk tea shops, as it is the known method applied today by many entrepreneurs. However, with the advancement of technology, not all businesses can keep up with the changes. Thus, struggling business owners and failing businesses appeared more in the industry. This study aims to explore the experiences regarding the reason why they use digital marketing, what platforms or techniques they use, its effects on their business operations, and advice or recommendation for digital marketing in coffee and milk tea shops. Moreover, this study determines what output may be proposed to enlighten owners/managers about other ways to use digital marketing or make them more knowledgeable. Using phenomenological design and a qualitative approach, researchers conducted a study with the help of the 12 owners/managers of coffee or milk tea shops that responded to the semi-structured interview along with the audio and written recording that the researchers prepared and conducted. This study showed that most of the participants managing their businesses were female and between the ages of 20 to 25 years of age. The managers use digital marketing for the reason that it is the trend and it attracts more customers. Specifically, social media platforms, including Facebook, Instagram, and Tiktok, are widely popular techniques in using digital marketing in their respective businesses.

Moreover, when it comes to the effects of digital marketing, the participants mentioned that it is indeed a helpful tool to increase the record of daily customers and sales in one's enterprise. Furthermore, the participants advised and recommended continuing to post their products online or advertise them using digital marketing to aspiring entrepreneurs or struggling business owners. The participants are generally females between the ages of 20 and 25. The use of digital marketing is due to it being a trend, and that it attracts customers. The impacts of digital marketing on one's business were demonstrated using Facebook, Instagram, and Tiktok. It specifically increases the number of clients and, as a result, their sales. The researchers came out with an infographic brochure as an output to guide and bring enterprises to another level of success with digital marketing.

Keywords: Digital Marketing

Marketing

The Power of Social Media Influencers Among the Senior High School Students at General de Jesus College

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Today's generations are avid followers of social media influencers who have enormous followers and possess the power to persuade people. This study used well-founded theory and evidence to determine why social media influencers significantly influence teenagers. The study focused mainly on 219 senior high school students in General De Jesus College. Structured questions served as the basis of the survey question to explain the data, identify, analyze, and interpret the results, reach conclusions, and make suggestions and recommendations regarding the influence of social media influencers. The selected senior high school ABM, HUMSS, STEM, and strands participated in this study to perceive the power of social media influencers on the respondents' confidence in their credibility, attractiveness, likability, and purchasing intention to buy products. The results revealed that social media influencers generally highly influenced the respondents in purchasing any brands or products. This indicates this established trust and confidence within these communities and can massively boost the brand reputation and drive significant results. Finally, the results emphasize the significant influence of social media influencers in today's digital age. The results demonstrate the need for social media influencers to be well-known to consumers in any product advertising. These findings may indicate that social media influencers have the power to alter public opinion and influence consumer behavior.

Keywords: Buying Intention, Buying Decision, Promoting Products

Marketing

Facebook as a Digital Marketing Strategy Among General de Jesus Senior High School Online Sellers

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Facebook has radically altered the way the world connects. It is no longer just a social media or networking website because it has become one of the most significant advertising platforms ever. This study will determine why Facebook is the most popular marketing strategy among General de Jesus College senior high school online sellers. It also aims to know the benefits that the respondents got and the challenges they encountered using Facebook as their digital marketing strategy. The qualitative method, a phenomenological approach, was employed in this study. This study was conducted with the help of ten Online Seller Senior High students. Semi-structured interviews and audio recordings were used as the data gathering tools; to acquire all of these, face-to-face and online interviews were used to get the respondents' answers concerning the problem. Most respondents said that Facebook is the Marketing Strategy they used when selling their products. Based on the respondents, Facebook helped their products or services to be known throughout social media, leading them to have more customers. Therefore their sales also increased. However, some challenges are encountered using Facebook. Some respondents said that they experience being scammed and get a lot of new inquiries about the product, but people who inquire are not buying it. The booklet contains information on how they can effectively utilize Facebook when selling and suggestions about using other social media platforms as a marketing strategy. General de Jesus College senior high school online seller used Facebook because of its convenience. Online sellers mentioned that their products or services got exposure through Facebook, so their customers increased. But they also encountered challenges which are getting scammed and receiving a lot of inquiries without buying it. Booklet regarding Facebook being an effective marketing strategy.

Keywords: Facebook, marketing strategy

Marketing

Effectiveness of Social Media as Marketing Tool in Gapan City, Nueva Ecija

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Social media has burgeoned throughout the years. Many people have found it convenient to use in different aspects. At the same time, the development of business owners' strategies had grown. Business owners' started using social media to market their products. Entrepreneurs and marketers recognize the necessity to stay up with the rapid rate of change in an era when technology is prevalent or risks being obsolete. It is nearly difficult to create a marketing plan without considering social media. Social media has risen significantly in today's marketing mix, particularly promotion. The study conducts empirical research to determine how useful social media is as a tool for marketing, and an effort has been made to examine the degree to which social media influences customers' purchase decisions. The instrument used by the researchers in this study is questionnaires. The researchers designed this after considering the factors. Part I contains the respondents' profiles, including their names, sex, age, and how long they use social media as their marketing tool. Part II is centered on identifying the effects of social media on their business as well as finding its weakness. Based on the findings of the response of our respondents drawn, 35 of our respondents aged 18 years old and below, with 17.5 %, chose social media as their marketing tool.

In comparison, the most significant responses over 120 of our respondents at the age of 19-30 years old, with 60% of our respondents choosing social media as their marketing tool, in addition to 45 respondents at the age of 31 and above at the percentage of 22.5 % chose social media as their marketing tool. In a total of 200 respondents. 75% of our respondents agreed that social media could be helpful as their marketing tool and make their work much more manageable, while 25% disagreed. Because of the negativity they received while using social media as a marketing tool, they could be scams, or the product they have received is not what it looks like when it is being purchased. The researchers concluded that social media is effective for marketing products that merchants want to introduce. And using social media is one of the best ways to know their product and brand. Using social media helps people to locate these sellers too.

Keywords: Social Media, Marketing

MECHANICAL ENGINEERING

Development and Performance Assessment of a Pedal-Powered Generator for Bicycles as an Alternative Energy Source for Charging Devices.

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Charles Andre Sobremonte

Energy is the most vital source of Earth's power consumption. (EPA United States Environmental Protection Agency, 2020) Transportation is one sector that consumes the most energy but emits carbon emissions. In this study, the researchers aim to develop a Pedal-Powered Generator that would be an alternative source of energy that can charge multiple devices that is more efficient while integrating with safety attachments. This experimental study investigated the relationship between voltage and the number of devices connected to a Bicycle Powered Mobile Charger. The researchers aimed to develop an efficient charger and measured the electrical power output and efficiency using voltage, current, and mechanical power input formulas. The study involved assembling the machine and conducting testing procedures with different cell phones. The results contribute to the development of a Bike Powered Mobile Charger. The researchers conducted tests to determine the current efficiency of the mechanism. According to the result that the researcher found. The pedal-powered generator is fast and reliable during emergencies and long rides. The machine can generate 3% within 5 minutes of pedaling. So it can charge a cellphone within 2 hours and 44 minutes with a 5080 mah battery. The pedal-powered generator can charge eight mobile devices simultaneously due to its 8 USB ports. The study's findings prove that the pedal-powered generator is a highly efficient replacement charging system, supplying power to the bicycle's horn and lights. This novel system demonstrates its capacity to supply a sustainable and dependable power source for these crucial components by harvesting the kinetic energy produced by cycling.

Keywords: Efficient, Bicycle Powered Mobile Charger, Pedal-Powered Generator, Alternative Source of Energy

Mechanical engineering

MEDICAL EDUCATION

Effectiveness of Chaga Mushroom (*Inonotus obliquus*) With Roasted Japanese Rice Grain as Herbal Tea

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Many see mushrooms as risky and have a bitter-bland flavor, limiting their true potential. In conducting this study, the researchers noticed how the brewing method and temperature of the Chaga mushroom and the proper way of roasting the Japanese rice grain could affect the overall taste and nutrients of the tea. Although the *Inonotus Obliquus* (Chaga Mushroom) has long been used as a medication in other nations, more research is needed to understand its possible health advantages and risks better. This herbal tea is a unique and flavorful beverage that combines the medicinal properties of Chaga mushrooms with the nutty aroma of roasted rice. This study conducted experimental research to explore the efficiency of Chaga Mushroom (*Inonotus obliquus*) with roasted Japanese rice grain as herbal tea. An experimental study concludes that this herbal tea provides and can be used as a treatment for a variety of ailments. The findings of this study indicate the changes in the rabbits' health after taking the Chaga mushroom as tea orally to prove its beneficial effect. This experimental research on the treatment of chaga mushroom extract can offer antioxidants, helps neutralize harmful radicals in the body, and decreases the risk of diseases. In conclusion, this herbal tea may offer an enjoyable taste experience. Aside from its taste, the researchers have forecasted that the Chaga mushroom's hint of roasted Japanese rice grains as herbal tea will work on the human body as a metabolism booster and can help lower cholesterol, lower blood pressure, and lessen stress.

Keywords: herbal tea

Medical Education

Effectiveness of Natural Antacid as an Alternative for Over-The-Counter Tablets

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Angelic Rovian Lapitan
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The Researchers' purpose in this study is to evaluate the efficacy of a natural antacid as a potential alternative to commercially available over-the-counter antacid tablets. This study aims to examine whether a specific natural antacid, which could be derived from plant-based ingredients or other natural sources, can effectively alleviate symptoms associated with excess stomach acid. It may involve conducting experiments or clinical trials to compare the performance of the natural antacid against over-the-counter tablets in terms of symptom relief, duration of action, safety, and overall effectiveness. In this research paper, researchers used an experimental method to test natural antacids (ginger and apple cider vinegar) on a pH paper to find out what could be an alternative to over-the-counter tablets for acid reflux. As a result of the experiment, when the ginger mixture was mixed in the artificial stomach and tested on the pH paper, it came out that it had a pH level of 2, which is said to be equal to the pH level of over-the-counter tablets. Thus, ginger can be an alternative to over-the-counter tablets to help treat acid reflux. The results prove that the experiment was practical and proven in the tests on every natural antacid in the pH paper: ginger. It can be an alternative for treating acid reflux because it has been proven to have an equal pH level of 2.

Ginger, apple cider, natural antacid

Medical education

The Effectiveness of Using Selected Organic Spice and Pomelo Peel Extract as an Insecticide

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This research study investigates the effectiveness of organic spices, namely tomato leaves, garlic, ginger, chili, and pomelo peel, as insecticides for killing insects. This study aims to determine whether these natural extracts can serve as viable alternatives to synthetic insecticides, providing a safer and more environmentally friendly approach to insect control. The experiment involved conducting bioassays using common insect pests, including mosquitoes, cockroaches, and ants. Extracts from tomato leaves, garlic, ginger, chili, and pomelo peel were prepared through maceration and solvent extraction. These extracts were then tested against a control group using a series of concentrations to assess their insecticidal properties. Mortality rates, as well as behavioral changes in the insects, were recorded and analyzed. The trials' results showed promising outcomes on the effectiveness of using selected organic spices, including tomato leaves, garlic, ginger, chili, and pomelo peel extract as an insecticide. Although the organic spices did not achieve a 100% kill rate like synthetic insecticides, they exhibited significant effectiveness against the target insects, namely mosquitoes, ants, and cockroaches. Across the three trials, the organic spices demonstrated a kill rate ranging from 70% to 90%. This indicates that the organic spices could control a substantial portion of the target insect population. These results suggest that the selected organic spices have the potential as natural alternatives for insect control. The findings of this study suggest that organic spice and pomelo extracts, particularly tomato leaves, chili, ginger, and garlic, possess significant insecticidal properties, making them potential alternatives to synthetic insecticides. These natural extracts offer a safer and more environmentally friendly approach to insect control, reducing the reliance on harmful chemical pesticides. However, further research is required to optimize the extraction processes, identify the active compounds responsible for the insecticidal effects, and evaluate the long-term effects on non-target organisms and the environment.

Keywords: Effectiveness, Organic, Synthetic Insecticide

Medical Education

MEDICINE

Calamansi (*Citrofortunella microcarpa*) Leaf Extract as a Wound Healing Booster

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Calamansi (*Citrofortunella microcarpa*) is one of the most popular citrus fruits in the Philippines. It contains antioxidant and antibacterial properties, which are proven to be effective in accelerating wound healing. Due to the quick advancement, commercially manufactured items are becoming more and more prevalent. However, antibiotic ointments can cause allergies, itchy rash, and contact dermatitis. Therefore, creating an affordable and efficient solution that would lessen the physical and financial toll on human society is vital. This study was focused on determining the efficacy of Calamansi (*Citrofortunella microcarpa*) leaf ointment on wound healing as an alternative wound remedy. The experimental method was used to determine the characteristics of the laboratory mice for their treatment of incisional wounds using Calamansi (*Citrofortunella microcarpa*) leaf ointment. The first group, the group that received Calamansi (*Citrofortunella microcarpa*) leaf ointment twice, took four (4) to seven (7) days to heal. The second group, the group that received Calamansi (*Citrofortunella microcarpa*) leaf ointment once, took five (5) to seven (7) days to recover. This shows that Calamansi (*Citrofortunella microcarpa*) leaf ointment applied twice a day is the most effective in shortening the healing days of wounds. The different application of Calamansi (*Citrofortunella microcarpa*) leaf ointment produces various effects on the incisional wounds of mice. The more often the Calamansi (*Citrofortunella microcarpa*) leaf ointment is applied, the faster the wounds heal. It proves that the Calamansi (*Citrofortunella microcarpa*) leaf ointment substantially aids in inducing wound closure rate.

Keywords: Calamansi, Ointment, Wound Healing

Medicine

**In-Vitro Antibacterial Effect of Ethanolic Leaf Extract of Betel Palm Tree (*Areca catechu*)
Against *Staphylococcus aureus***

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Antibacterial resistance is a critical global health threat. Without urgent actions, the world will face a post-antibiotic era where common infections can kill again. In response, plant-based antibacterials are promising as they contain secondary metabolites with antibacterial properties. In this study, the researchers examined the antibacterial efficacy of Betel Palm Tree (*Areca catechu*) leaf extract against *Staphylococcus aureus*. An experimental research design was employed to assess the antibacterial efficacy of Betel palm leaf extract. This method ascertained the cause-and-effect link between the independent variable (Betel Palm Leaf Extract) and the dependent variable (*Staphylococcus aureus*).

Moreover, Ethanolic extraction was used in this study, and Nutrient Agar Well Diffusion was used as the testing procedure. Results are then examined to see whether there is a significant difference between the treatment and the positive control (Chloramphenicol). The results revealed that the ethanolic leaf extract of the Betel Palm Tree (*Areca catechu*) had no effect against the colony of *Staphylococcus aureus*, as demonstrated with a 0 antibacterial index. This shows that the plant extract is ineffective in inhibiting the growth of the bacteria. In contrast, the positive control (Chloramphenicol) had an antibacterial index of 4.0, indicating its effectiveness against the bacteria. Based on the data analysis, the ineffectiveness of Betel Palm Tree (*Areca Catechu*) ethanolic leaf extract in inhibiting the growth of *Staphylococcus aureus* was due to several factors such as low concentration of phytochemicals, maceration technique in extraction, usage of ethanol as the solvent, non-isolation of phytochemical constituents from the extract, and selection of bacteria. This demonstrates the need to conduct the study with different types of methods in testing the effectiveness of the leaf to validate the result of this study.

Keywords: Antibacterial Resistance, Betel Palm Leaf (*Areca catechu*), Antibacterial Effect

Medicine

Effectiveness of Using Calendula and Aloe vera Ointment in Treating Minor Injuries

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The researchers aim to investigate the effectiveness of calendula and aloe vera ointment on minor wounds. Calendula and Aloe Vera are known for their antimicrobial properties, which can help reduce pain, swelling, and infection. In this study, the researchers chose experimental as their research design which could help them achieve the study's objective. This study focuses on the effectiveness of aloe vera and calendula regarding minor injuries. The researchers use observation to see the healing of wounds in laboratory rats. Using this method, the researchers gain insights and information regarding how effective the ointment is for the laboratory rats' minor injuries. The laboratory rat treated with the combination of these two extracts had a 6 days period of healing period. The sizes of wounds in rats decreased each day of the treatment. These combined extracts yield a 100% percentage of wound closure in just 6 to 7 days. There is no sign of side effects on the wound and skin of the laboratory rat. Both treatments show that the incisional wounds on the rat decrease in size on the following days of treatments. On the two extracts, the researchers observed that the Aloe Vera and Calendula treatment heals in 6 to 7 days. The application of the improvised ointment resulted in the complete healing of the rats within six days.

The typical recuperation period of rats without ointment is approximately 12 to 14 days. The ointment was found to promote a partial rate of wound healing in the affected rats, amounting to 50% of the expected recovery rate. As a conclusion to the study, the healing properties of Aloe Vera and Calendula are more likely the same. Because the number of days in this trial is between 6 to 7 days, the healing effect will be faster if the amount of the product you will apply is equally the same on the wound size, mainly when applied to the whole affected area. Aloe Vera and Calendula are two plants that can help improve health. When used together in an ointment, they might help reduce swelling, heal cuts faster, and make skin softer.

Keywords: Ointment, Minor injuries

Medicine

Wound Healing Effects of *Hylocereus Polyrhizus* Stem Extract Ointment on Second-Degree Superficial Burned Albino Mice

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Burns are among the gravest and most common injuries, yet existing treatments are expensive and have side effects. Medical researchers suggest utilizing affordable natural ingredients to lessen the side effects when treating burns. The current study aimed to evaluate the efficacy of red dragon fruit (*Hylocereus polyrhizus*) stem extract as an ointment in treating superficial partial-thickness burns and also compared the Silver sulfadiazine through an experimental research design. Twenty-four (24) male albino mice were divided into four (4) groups of six (6) mice, generated through random selection. Silver sulfadiazine was applied to Group 1, while the ten percent (10%) red dragon fruit stem extract ointment was applied to Group 2. Groups 3 and 4 were treated with five percent (5%) stem extract and simple ointment base, respectively. All treatments were topically administered every twenty-four (24) hours.

In comparison, the wound contraction was measured twenty-four (24) hours after the burn induction and every forty-eight (48) hours after that until the fourteenth day. The ten percent (10%) red dragon fruit stem extract ointment demonstrated a higher mean (%) wound contraction effect of 82.12, and the five percent (5%) red dragon fruit stem extract ointment with 45.57 against Silver sulfadiazine with 42.11. A mean (%) wound contraction of 27.47 was observed for the ointment base. In conclusion, the ointment with 10% and 5% stem extract concentrations from a red dragon fruit plant is an effective treatment for superficial second-degree burns and a potential substitute for Silver Sulfadiazine, wherein a higher concentration indicates a higher wound contraction rate.

Keywords: Red dragon fruit, *Hylocereus polyrhizus*, Wound healing

Medicine

**Antibacterial Activity of Pumpkin (*Cucurbita maxima*) Fibrous Strands Ethanolic Extract
Against *Escherichia coli***

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Jastine Manalastas

Pumpkin (*Cucurbita maxima*) fibrous strands extracts' antibacterial activity has been explored and tested on different bacteria. However, it has not been tested against *Escherichia coli*. In this study, the researchers explored the potential antibacterial activity of Pumpkin (*Cucurbita maxima*) fibrous of ethanolic extract against *Escherichia coli* and differentiated it from commercialized medicine (Chloramphenicol). The experimental method, a type of quantitative research, was used in this study to determine the antibacterial activity of the ethanolic extract of Pumpkin Fibrous Strands against *Escherichia coli*. The disc diffusion method was used to determine the zone of inhibition of bacterial growth of *Escherichia coli*. The researchers used the Antimicrobial Index formula to statistically analyze the ethanolic extract of Pumpkin Fibrous Strands and Chloramphenicol. The study's results revealed that the pumpkin fibrous strand extract lacked any inhibitory effect on the growth of *Escherichia coli*, as evident from the absence of a zone of inhibition. Compared to the positive control, Chloramphenicol, the pumpkin extract proved ineffective in inhibiting the targeted microorganisms. One of the implications that affect the efficacy of plant-based extract is the preparation of the extract. After conducting a thorough investigation and analyzing the evidence carefully, the researchers have concluded that the results that the study produced showed that Pumpkin (*Cucurbita maxima*) fibrous strands of ethanolic extract showed no activity as an antibacterial agent against *Escherichia coli* and can not be used as an alternative to commercialized medicine. About the results and objective of the study, the researchers suggest that future researchers can do a further analysis of pumpkin (*Cucurbita maxima*) fibrous strands' phytochemical properties as well as look for other possible uses of pumpkin (*Cucurbita maxima*) fibrous strands.

Keywords: Antibacterial, Pumpkin, *Cucurbita maxima*

Medicine

Phytochemical Properties and Antibacterial Activities of the Ethanolic Extract of Papaya
(*Carica papaya*) Leaves

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The antibacterial activities of plant extracts against bacteria, specifically the extract of papaya leaves, have been studied and proven for years to have anti-inflammatory and antibacterial activity. It can also inhibit the growth of bacteria. This research primarily aims to determine the phytochemical properties and antibacterial activities of the ethanolic extract of Papaya (*Carica papaya*) leaves against *Staphylococcus aureus*. The study utilized the experimental method design. The leaves of Papaya (*Carica papaya*) were shade-dried, powdered, and extracted using solvent ethanol. The extracts were then tested using the pre-poured Nutrient Agar (NA) to determine if the sample showed antibacterial activity against *Staphylococcus aureus*. The sample shows that the ethanolic extract of Papaya (*Carica papaya*) leaves has no antibacterial activity against *Staphylococcus aureus* and received an Antimicrobial Index (AI) of 0.2, which means that the clearing zone of inhibition is not enough to prevent the growth of bacteria *Staphylococcus aureus*. After due investigations, sufficient evidence through analysis, and careful interpretation, the study shows that the ethanolic extract of Papaya (*Carica papaya*) leaves can inhibit the growth of *Escherichia coli* rather than *Staphylococcus aureus*. Based on the findings, the researchers recommend that future researchers may use another drying method and different percentages of ethanol to determine if the extract's efficacy would remain the same in light of the findings.

Keywords: antibacterial, extract, effectiveness, phytochemical

Medicine

MENTAL HEALTH

Lived Experiences of Selected Grade 11 Students of General de Jesus College Who Were Bullied at School

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John Lloyd De Leon

Bullying is a psychological and pedagogical problem connected with public health that must be solved immediately by various professionals. This study aimed to investigate and examine the lived experiences of selected Grade 11 students of General de Jesus College who were bullied at school to recognize and identify incidences of bullying and its various types, styles, and forms. A phenomenological research design was employed in this study to determine the challenges encountered by selected Grade 11 students of General De Jesus College who were bullied at school. Ten (10) students were selected as respondents using purposive sampling. A semi-structured interview was used to gather the needed information about this research. The researchers also conducted face-to-face interviews and audio recordings to understand how people feel in that situation and to obtain precise and clear responses from respondents to better understand their responses. By conducting the study this way, the researchers created a friendly and open environment allowing participants to talk about their personal experiences. Findings showed that most of the respondents were experiencing two kinds of bullying, namely: verbal and physical bullying. The majority also stated that they lost their self-esteem and self-confidence due to bullying, which affected their mental health and academic performance. Based on the gathered data, it was found that most students go through some bullying and most often experience anxiety and depression. The findings showed that school bullying still exists and influences students' academic performance and attendance.

Keywords: lived experiences of bullying

Mental health

Coping Mechanisms of Senior High School Students in General de Jesus College on the Impact of Pandemic Towards Their Well-Being

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Jethro Miguel Manuel
Pia Mangalus

The COVID-19 pandemic has profoundly impacted students' well-being, especially now that they transitioned from online learning to face-to-face learning. This study primarily aims to investigate the coping mechanisms of senior high school students of General de Jesus College on the impact of the pandemic on their well-being, specifically in their behavior, mental health, and academic performance. The descriptive method was used in this study, where respondents were asked through survey questions. This study utilized the coping mechanism theory to elaborate further on the respondents' coping mechanisms on the pandemic's impact on their well-being. Structured survey questionnaires were given to three hundred (300) senior high school students chosen through simple random sampling. The results show that the pandemic impacted the respondents' well-being, specifically in their behavior, academic performance, and behavior. Thus, they agreed that they came up with coping mechanisms to overcome the changes they were going through. These coping mechanisms were praying to God to help them cope with problems, concentrating on doing something good like cooking for family, playing online games often, and turning to homework or other substitute activities to take their mind off things. To sum up, the respondents revealed the impact of the pandemic on their mental health, which moderately affected their academic performance and behavior. However, using different coping mechanisms enabled them to handle and manage their behavior well.

Keywords: Coping Mechanisms, Pandemic, Impact, Well-being

Mental health

PHARMACOLOGY AND PHARMACEUTICAL MEDICINE

Antifungal Efficacy of Soap Containing Lagundi Extract (*Vitex negundo*), Aloe vera(*Aloe barbadensis* Miller), Garlic(*Allium sativum*), and Philippine Lime(*Citrus microcarpa*) through Lab Testing

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Jann Michael Jaraba
Wiljanh De Belen
Ronnell Francisco

Fungal infections are a global health concern affecting a significant population. Antifungal soaps are commonly used to prevent and treat these infections. However, there is a growing demand for alternative soap formulations that are effective, affordable, and accessible to a broader population. This study aimed to develop an experimental soap using natural ingredients and evaluate its efficacy in inhibiting fungal growth and spread. The experimental soap was formulated using palm oil, canola oil, coconut oil, lye, water, and plant extracts, including garlic, Aloe Vera, Philippine Lime (Calamansi), and Lagundi. Two versions of the soap were prepared: solid and liquid. The formulation followed specific ratios of oils to lye, with precise measurements of each ingredient. *Aspergillus Niger*, a common food mold, was used for observation to assess the antifungal efficacy. The effects of the soap were monitored over six days, with observations recorded every three days.

The spread of the fungi was visually evaluated by comparing the areas treated with soap to untreated areas. The experimental soap, both in its solid and liquid forms, demonstrated antifungal properties. The solid soap showed comparable effectiveness to sulfur, a widely used antifungal soap. However, there was a slight variation in inhibiting fungal growth and spread, with the experimental soap being approximately 3% to 10% less effective than sulfur soap. The liquid soap exhibited lower efficacy than sulfur soap, with a margin of around 10% to 15% less effectiveness. In some instances, fungal infections were observed in areas treated with liquid soap, suggesting limitations in inhibiting fungal growth.

In conclusion, the experimental soap showed promising results in inhibiting fungal growth and spread, although slightly less effective than sulfur soap. This study contributes to the understanding of alternative soap formulations for fungal infections. However, further research and development are necessary to address the observed limitations, such as improving the soap's spread and addressing fungal infections in specific areas. These findings provide valuable insights for future researchers and entrepreneurs in developing antifungal soaps. They underscore the importance of ongoing investigation and refinement of soap formulations to enhance their antifungal properties and potency.

Keywords: Antifungal, efficacy, Soap, Lagundi extract, Aloe Vera, Garlic, Philippine Lime, Laboratory testing

Pharmacology & pharmaceutical medicine

PSYCHOLOGY

Lived Experiences of Selected Senior High School Students of General de Jesus College in Seeking Academic Validation

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This paper focused on the experiences of senior high school students in seeking academic validation. Its purpose is to spread awareness regarding the experiences of the selected students and the factors that caused them to seek academic validation, the challenges they encountered, their coping mechanisms when dealing with it, and advice to their fellow students who are also experiencing academic validation. The phenomenology qualitative research technique is utilized to acquire an accurate explanation regarding this study. The data was gathered using semi-structured interviews, and ten senior high school students were interviewed in person. This paper revealed that some factors cause students to seek academic validation, including self-pressure, family and parental pressure, and peer pressure. Stress, pressure, and expectations are the problems that students encounter when seeking academic validation. The students' coping mechanisms when dealing with the impact of academic validation are doing what they want to do, motivating themselves, and spending time with friends. The selected students gave different types of advice to fellow students seeking academic validation. These are remembering that one did their best, enjoying the present, and knowing one's limitations. Academic validation occurs when students rely on their academics to feel appreciated (Brading, 2023). This paper's main objective is to spread awareness regarding this phenomenon to minimize academic validation's impact on students' well-being.

Keywords: academic validation, coping mechanisms, expectations, stress, pressure, experiences,

Psychology

Impact of Social Media Exposure on Mental Health of Selected Grade 11/12 Senior High School Students of General de Jesus College

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Today's youth are the most active users of social media platforms such as Facebook, YouTube, Google, Twitter, and Instagram. Research has shown that social media significantly impacts students' lives because it allows them to educate themselves at any time. However, besides these benefits, social media has some drawbacks. The study aims to determine the various impacts of social media exposure on the respondents' mental health. The descriptive method was used in this study, concentrating on the impact of social media exposure on the mental well-being of the 80 respondents from HUMSS students of General De Jesus College. Online structured questionnaires served as the basis of the survey questions employing the simple random technique to select the respondents who would participate in the study. The study results showed that too much media exposure moderately impacted the respondents' mental health in terms of their communication, sleeping schedule, emotional well-being, and behavior. The findings highlight social media exposure's negative and positive impact on the respondents' mental health in today's digital age. These findings indicate that social media influences their behavior's development, impacting their mental health. In this regard, they have to properly manage the use of social media to avoid its negative impacts.

Keywords: Social Media, Negative and Positive Impact, Mental Health

Psychology

The Effects of Aromatherapy Fidget Cube on Stress Reduction: A Study of Blue Ternate Oil Diffused as an Additional Feature to Fidget Cube

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Zhantie Gaile Guevarra

Fidget tools are invented not just for your hands to do repetitive movements but to relieve stress, anxiety, and depression and help people with ADHD. However, in recent studies, there have been some unfavorable results from these fidget tools. Thus, the study aims to provide a fidget cube with an additional feature: aromatherapy from the essential oil of Blue Ternate. Aromatherapy Fidget Cubes were made using these methods: Collecting fidget cubes and organic tissue absorbents. Blue Ternate is soaked in 95% ethanol for three days before being filtered and rotary evaporated to extract stress-relieving chemical properties: flavonoids. Aromatherapy Fidget Cubes were made by adding absorbent organic tissue to commercial fidget cubes to hold the essential oil. Five participants completed the Perceived Stress Scale before using a commercial fidget cube for four days to determine its efficacy—15 minutes daily with five drops of aromatherapy. The Perceived Stress Scale and Carver Brief Cope Inventory were done. The testing was done again but using the Aromatherapy Fidget Cube. All respondents were interviewed after testing. The data was collected, examined, and analyzed. The five respondents who participated in this study show overall changes in their Perceived Stress Scale and Brief COPE Inventory. With the use of the Perceived Stress Scale, 1.) Aromatherapy Fidget Cube is a practical fidget tool for lowering stress as the respondents' mean decreased from 31 to 13.8 with a significant difference of -17.2. The score goes from High Perceived Stress to Low Perceived Stress. 2) In comparison between Aromatherapy Fidget Cube and the commercially available fidget cube, the respondent's score after using the Aromatherapy Fidget Cube goes from the mean of 31 to 13.8. In contrast, the commercial fidget cube goes from the mean of 31 to 20.2. It is seen that Aromatherapy Fidget Cube perceived stress scores move from High Perceived Stress to Low Perceived Stress. In contrast, a commercial fidget cube only moves from High Perceived Stress to Moderate Stress Level. 3.) Despite Aromatherapy Fidget Cube being more expensive as it has added features, it is preferred compared with the commercial Fidget Cube. In conclusion, Aromatherapy Fidget Cube effectively relieves stress. Also, Aromatherapy Fidget Cube is more effective in reducing stress than the commercially available fidget cube using the Perceived Stress Scale and Brief Cope Inventory.

Keywords: Aromatherapy, Fidget Toys, Fidget Cube, Blue Ternate

Psychology

PUBLIC HEALTH AND COMMUNITY MEDICINE

The Efficacy of Lemongrass (*Cymbopogon citratus*) Extract and Oregano (*Origanum vulgare*)
Extract as Plant-Based Mosquito Repellent Oil for Diffuser

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One of the primary problems facing the Philippines has been the spread of mosquito-borne diseases like dengue and other illnesses. This study examined the mosquito-repelling properties of Oregano (*Origanum vulgare*) and Lemongrass (*Cymbopogon citratus*). This study aims to evaluate the efficacy of Oregano (*Origanum vulgare*) and Lemongrass (*Cymbopogon citratus*) as mosquito-repellent alternatives for diffusers instead of synthetic chemical repellents. The three concentrations of extract, which are Group A (75% Oregano and 25% lemongrass), Group B (50% Oregano and 50% lemongrass), and lastly Group C (25% Oregano and 75% lemongrass) tested in a mosquito box net that filled with 30 mosquitoes in 3 hours to test its repellency. This mosquito box contains black cloth and dissolves sugar in water to attract mosquitoes. After testing the two different mosquito repellents, which are the synthetic mosquito repellent and the plant-based mosquito repellent, the researchers tried three different concentrations at a duration of 3 hours: 75% oregano (*Origanum vulgare*) and 25% lemongrass (*Cymbopogon citratus*), with a repellent rate of 93%. 50% oregano (*Origanum vulgare*) and 50% lemongrass (*Cymbopogon citratus*) have a repellency rate of 95%. And the 25% oregano (*Origanum vulgare*) and 75% lemongrass (*Cymbopogon citratus*) have a repellency rate of 100%. The results show no significant differences between the two, and plant-based mosquito repellents can be used as a replacement for synthetic mosquito repellents due to their high repellency rate. The results show that 25% of Oregano and 75% of Lemongrass extract exhibited more repellency than other concentrations.

Further studies are warranted to confirm the effectiveness of oregano and lemongrass by using different extraction methods. They may also perform other testing methods in computing the repellency rate of their mosquito-repellent diffuser. Preferably, pharmaceutical companies and medical practitioners may conduct additional exploration or further analysis on the phytoconstituents of oregano and lemongrass.

Keywords: Lemongrass (*Cymbopogon citratus*), Oregano (*Origanum vulgare*), Mosquito repellent

Public health & community medicine

The Effectiveness of Atis (*Annona squamosa*) Leaves Extract as a Spray Repellent to Mosquito

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Diana Rose Lagutan
Eloisa Mariel Ramirez
Jhanella Constantino

Mosquitoes are hazardous insects. They can carry diseases such as dengue, chikungunya, zika virus, yellow fever, bacteria, etc., easily transferred in humans. The researchers produced a safer mosquito spray repellent from the Atis (*Annona squamosa*) leaves extract to solve such an issue. The researchers used an experimental design to gather information about the effectiveness of Atis (*Annona squamosa*) leaves extract as a spray repellent for mosquitoes. Mosquitoes were exposed to different concentrations of the extract (5%,15%,47%) inside an improvised mosquito cage. First landing, the number of mosquitoes that landed and protection time were observed. Anova test results revealed a significant difference between the effectiveness of Atis (*Annona squamosa*) leaves extract and commercially available insect repellent. The highest repellency rate of Atis leaves extract was found with 47% concentration (100%) within 3 minutes and had a complete protection time of 6 minutes. With that, the researchers concluded a significant difference in the frequency of landing of mosquitoes treated with the formulated concentration and the commercially available mosquito repellent, and the concentrated Atis (*Annona squamosa*) leaf extract has entirely different levels of effectiveness.

Keywords: Atis leaves extract, mosquito repellent, Plant-based repellent, Protection time.

Public health & community medicine

RISK AND SAFETY SCIENCE

Awareness of the Selected Grade 12 Students in Their Rights and Protection in Online Shopping

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Sheine Margarete Santos
Cheska Abelardo

Online shopping has become increasingly common since this generation has significantly relied on convenience and practicality. This study aims to determine the difficulties and problems faced by Grade 12 students when exercising their legal rights when shopping online. The descriptive research method was employed in the study, applying the theory of consumers' awareness and protection in online shopping. Structured questions were used as the basis of the questionnaire to explain the data, identify, analyze and interpret the results and conclusions, and make suggestions and recommendations regarding the grade 12 awareness of their rights and protection in online shopping. Selected grade 12 students participated in this study to measure their awareness of their rights and protection in online shopping regarding product quality, delivery & logistics, payment, customer service, additional charges, and online shopping scams. The findings revealed that respondents had little knowledge and understanding of their online shopping rights and protections. The findings demonstrate the need for the respondents to gain a deeper understanding of their rights and protections in online shopping, such as their right to accurate product information, fair pricing, and the ability to make informed decisions, secure payment methods, data protection regulations, and verification of the legitimacy of online sellers. Additionally, they must be aware of dispute-resolution mechanisms and the importance of responsible digital citizenship. This knowledge is a foundation for their future as responsible consumers in an increasingly digital world.

Keywords: Online Shopping, Legal Rights, Awareness

Risk & safety science

SOCIAL SCIENCE

Experiences of Selected Grade II Students of General de Jesus College as Public Commuters

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Public commuting is a means of transportation for readily universal and accessible travel from one place to another. Most students resort to using public transportation to get to campus. However, public transit has been found to impact commuters, thus developing a problem negatively. (Mallari, et al., (2021). In this study, the researchers explored the experiences of selected grade II General de Jesus College students as public commuters. This qualitative study utilized a phenomenological approach to understand better a sample population of fifteen (15) student commuters from General de Jesus College. Through semi-structured interviews, the study revealed significant factors in commuting experiences and how they had impacted a student's health and academic life. The majority of the population sample was aged 16 years old, concluded to be women, and their residences were mostly from San Isidro, Nueva Ecija. It was found that the respondents had faced significant problems, such as the difficulty of finding jeeps to accommodate them, thus finding time valuable management in managing the commuting struggles. Additionally, the respondents felt adverse about having longer durations in their commutes which caused to be a significant factor in the problems that occurred. To conclude the overall points, the study found a correlation between the commutes of selected Grade II students and their school life, resulting in problems and challenges that impacted them. Given the study's findings, recommendations were provided to give light and enhance students' commuting experiences.

Keywords: Public Commuting, Students, Experiences, Commuters

Social sciences

Battling Colorism: Struggles of Selected Senior High Students in General de Jesus College With Skin Tone Bias

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Jessica Cape
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Favoring lighter complexion over darker skin is a behavior known as colorism, and it can have disastrous effects on the people it affects (Grant, 2023). The researchers thoroughly investigated the challenges of the chosen General de Jesus College students in grades 11 and 12 with colorism during the academic year 2022–2023. The study aimed to learn more about the experiences and their effects on the chosen respondents. This paper also covered coping strategies, suggestions, and potential remedies for students who experience skin-tone bias. The study elaborated on the experiences of senior high school students using a phenomenology qualitative research technique. A semi-structured interview with ten (10) respondents provided essential data on the topic of this study. The researchers also conducted in-person and online interviews to grasp the respondents' perspectives further. This study has resulted in figuring out that the majority of the respondents experienced discrimination and some experienced bullying. The findings also showed that many were mentally affected because of their issues, while some were affected physically and emotionally. It has also been revealed that embracing skin tone is an effective way of dealing with the respondents' issues because of colorism. The students that took part in this study suggested using school advocacies and promoting mutual respect for everyone to eradicate the problem. The results display the need for proper acknowledgment of the issue. Not addressing this will not eradicate the problem, and will continue to be rampant.

Keywords: colorism, complexion, skin tone, struggles, challenges

Social sciences

Lived Experiences of Selected Junior High School Students of General de Jesus College
Struggling Due to Parental Pressure

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Anxiety is highly concerning these days. Parental pressure in several facets of adolescent life contributes. This research aims to better understand, give voice to, and, if necessary, address Junior High School Students who are struggling due to parental pressure and require medical attention. A qualitative research design was used for this study. The study's demographic includes male and female students at General de Jesus College. Ten students from the Junior High School Department were chosen using purposive sampling. The student's responses to parental pressure were gathered through a one-on-one interview. According to our findings, most students who experience parental pressure are under 15, and there is no significant difference between male and female pressure. It has also been shown that most students struggle with homework and tasks due to parental pressure. The majority of them had a distant relationship with their parents as a result. To cope with parental pressure, they open themselves to others. The findings of this study could be used by students, parents, teachers, and future researchers to better understand the influence of stress on students' lives and to reduce, if not eliminate, this kind of anxiety in the future.

Keywords: parental pressure, struggles, anxiety

Social sciences

WOMEN AND GENDER STUDIES

Gender Stereotyping: Impact on Senior High School Students' Behavior and Academic Performance at General de Jesus College

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Gender stereotyping is a broad assumption or preconception about the traits or functions women and men should or should not have or do. It significantly impacts the development of every individual in terms of academic performance, social life, and behavior. Hence, this study aims to understand the various factors influencing gender discrimination in schools and how the respondents cope with this kind of situation. The descriptive method was used in this study, and random sampling as its testing method, utilizing the social learning theory. The main instrument used to gather data was the questionnaire through an online survey. Questionnaires were administered to (300) Senior High School students at General de Jesus College as the respondents. The results show that the majority of the respondents agreed that gender stereotyping had little impact on their academic performance, behavior, and social life, thus earning a highly favorable result about the coping mechanism to cope with different types of situations. The study shows the acceptance of the respondents on the reality of gender stereotyping in school; hence, they learned to adopt some coping mechanisms, such as avoiding people with damaging gender stereotypes beliefs and deciding on their preferred courses rather than letting other people dictate their decisions. These views help the respondents face the difficulties of discrimination and handle themselves well when faced with these circumstances.

Keywords: Gender stereotyping, Academic performance, Behavior

Women & gender studies

Challenges of Female Senior High School Student Council Officers in General de Jesus College

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Despite evidence indicating a connection between influential female school leaders and positive learning outcomes, women remain significantly underrepresented in school leadership. This study aims to increase people's understanding of women's importance in society and allow female student council leaders to express their goals and abilities and bring about widespread change. The researchers conducted this study to determine the challenges of female senior high school student council officers in general de Jesus College. This qualitative study employed the phenomenological method. Four (4) female Senior high School Student Council Officers participated in the study as respondents. The interviews were conducted face-to-face using semi-structured interview questions. The sampling technique used in this study is a purposive sampling technique. This study found that female student leaders at General De Jesus College struggle with time management due to the simultaneous passage of academics and positional work and the responsibility, balancing, pressure, and lack of sleep. At some point, they have a strategy to overcome the challenges by doing the most important list, trusting themselves, and including the hardships as female student council leaders. This study revealed that female student council leaders can lead, be the voice, and be a good example. The findings highlight the challenges female student leaders face, the strategies they use to overcome them, and how hard it is to be a female student leader.

Keywords: Difficulties of female student council officers, women, leadership

Womens & gender studies

Challenges Faced by Selected Grade II LGBTQ Students in General de Jesus College

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This study aims to identify the challenges faced by LGBTQ students at General De Jesus College. The respondents faced numerous challenges and problems, but they managed all of them. The phenomenological research design was used to determine the challenges faced by selected grade II Students in General De Jesus College. Qualitative research will be conducted to determine whether the LGBTQ students of General de Jesus College overcome the challenges. The researchers gathered six (6) students of Grade II from General de Jesus College to determine how LGBTQ students face their challenges or how they face them. A Semi-structured interview was used to gather the needed information about this research. The researchers also conducted face-to-face and online interviews to understand what they feel in that situation. The respondents who participated in our study answered the difficulties and troubles they ran into. In addition, they disclosed the challenges and problems affecting the LGBTQ community. These people experience discrimination, lack of parental support, unacceptance from family, and especially bullying. This study aims to spread awareness about LGBTQ members who suffer a lot because some persons treat them equally because of their identity. Most respondents stated that as a student member of the LGBTQ.

Keywords: Challenges Faced by LGBTQ Students, Lesbian, Gay, Bisexual

Womens & gender studies



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