

ICIC2024

3rd International Conference on International Colleges

**Sustainability:
For Science,
For Industry,
For Our Graduates**



June 19–20, 2024

Tunghai University International College

Table of Contents

Program at a Glance	3
Program in Detail	4
Abstracts for Project Session 1: Videos	12
Abstracts for Project Session 2: University Posters.....	21
Abstracts for Project Session 2: High School Posters.....	71
Abstracts for Oral Presentation Session 1A (Business / Management)..	86
Abstracts for Oral Presentation Session 1B (Literature / Film).....	89
Abstracts for Oral Presentation Session 2A (Education).....	91
Abstracts for Oral Presentation Session 2B (Sustainability)	91
Abstracts for Oral Presentation Session 1 A (Business / Management)..	86
Abstracts for Oral Presentation Session 1B (Literature / Film).....	89
Abstracts for Oral Presentation Session 2A (Education).....	91

Program at a Glance

Day 1: Wednesday, June 19 (Student-centered Program)			
09:00-10:00	Keynote Speech 1: Career Opportunities for University Students in Sustainable Industries Mr. Bart Linssen, General Manager, ENABL A/S Taiwan		
10:00-11:30	Project Session 1		
	Research Videos	Expository Videos	Creative Projects
11:30-12:30	Lunch Break / Nonstop Snack Bar		
12:30-14:30	Project Session 2: University Poster Contest		Project Session 2: High School Poster Contest
	Research Posters	Expository Posters	Research Posters Expository Posters
14:30-16:00	Workshop 1: Using AI Tools Strategically for Research Ms. Brianna Buljung and Mr. Seth Vuletich Colorado School of Mines		Workshop 2: Career Advice from Recent Graduates Guidance from Graduates in Various Professions
16:00-17:00	Day 1 Closing Ceremony Awards and Feedback from Judges		
Day 2: Thursday, June 20 (Educator-centered Program)			
09:00-10:10	Keynote Speech 2: Making Interdisciplinary Studies More Accessible in Higher Education Dr. Lin-Chi Chen, Professor, National Taiwan University		
10:10-10:30	Coffee Break		
10:30-12:00	Panel: Issues in Sustainability & Regulation Dr. Timo Eccarius, Dr. Ellen Kohl, Dr. Ellen Rouyer, Mr. Albert Sustanto		Invited Talk: Academic Misconduct & Dishonesty Dr. Bernard Montoneri
12:00-13:00	Lunch Break		
13:00-14:30	Oral Presentation Session 1		
	Oral Session 1A: Business / Management		Oral Session 1B: Literature / Film
14:30-14:50	Coffee Break		
14:50-16:20	Oral Presentation Session 2		
	Oral Session 2A: Education		Oral Session 2B: Sustainability
16:20-17:00	Day 2 Closing Ceremony Recognition of Outstanding Speakers		

WEDNESDAY, JUNE 19

Keynote Speech (9:00 – 10:00)

Career Opportunities for University Students in Sustainable Industries

Mr. Bart Linssen, General Manager, ENABL A/S Taiwan

With opening remarks by Dr. James Sims and Dr. Yevvon Chang

Hosts: Siphesihle Dlamini and Anne Cheng

Project Session 1: Videos (10:00 – 11:30)

Research Videos

V-7 **Perceptions of Online Experiences During the Covid-19 pandemic**

Martin Cai, Sharlyn Yu, Angelina Qiu

International Business Administration Program, Tunghai University International College

V-8 **Identifying Factors in Influencing Car Ownership in Taiwanese and Indonesian Household**

Ryo Chen and Nicole

International Business Administration Program, Tunghai University International College

V-9 **Stage Fright**

Shalom Mega

International Business Administration Program, Tunghai University International College

Expository Videos

V-2 **Circular Economy**

Huang Zi Qi, Cheng Wei Jen, Chen Tzu Lin, Wang Ai Zhen

International Business Administration Program, Tunghai University International College

V-5 **The Beauty of Taiwanese Nature: Through the Eyes of a Foreigner**

Tereza Balounová

International Business Administration Program, Tunghai University International College

Creative Projects

C-1 **Freezegether**

Alan Huang, Shelby Su, Coco Kuo and Ann Chen

International Business Administration Program, Tunghai University International College

V-1 **The Struggle is Real: The Hilarious Realities of International Student Life in Taiwan**

Miu Tobise and Vonny Cristina Tan

International Business Administration Program, Tunghai University International College

V-3 **Furniture Daddy: Just Rent It!**

David Hsu, Tina Lo, Samuel Liu, Cindy, Anne Zheng, Jessica Zhan, Nadia Li, Deven Ken and Chien-Chi Tseng

International Business Administration Program, International College, Tunghai University

V-4 **All-You-Can-Party**

Amy Hsiang, Shalom Mega, Nikolai Debrito, Nathaniel Bertram, James Prayogo, Irene Lin, Aixa Contreras and Estrella Tatiana

International Business Administration Program, Tunghai University International College

Project Session 2: University Posters (12:30 – 14:30)

Research Posters

- R-1 **Transparent Wood as a Potential Construction Material: Exploring Opportunities of Indoor Air Purification and Building Integrated Photovoltaics**
Christiane Kalamelu
Sustainability Science and Engineering Program, Tunghai University International College
- R-2 **Students' Opinions on Formats of Final Assessment**
Kseniia Dubinina
International Business Administration Program, Tunghai University International College
- R-3 **Dining Preferences among THU Students**
Miu Tobise, Gloria Liu, Doris Shi
International Business Administration Program, Tunghai University International College
- R-4 **Would International Undergraduate Rather Stay or Leave Taiwan After Graduation?**
Enzel Viana Sembiring and Stefanie Harry
International Business Administration Program, Tunghai University International College
- R-5 **Research Proposal: Student Works Part Time Jobs**
Lay Sophy, Simba Turkmenova, James Huang
International Business Administration Program, Tunghai University International College
- R-06 **Impact of COVID-19 on Health and Well-Being**
Haku Batdelger and Wukong
International Business Administration Program, Tunghai University International College
- R-07 **A Simple Tip That Will 100% Increase Your GPA**
Sean Darren and Bertram Chandra
International Business Administration Program, Tunghai University International College
- R-08 **A Research Poster About Physical Learning V.S Online Learning: Preferences of the Whole THU Students**
Yirong Li and Jason Jian
International Business Administration Program, Tunghai University International College
- R-09 **Pathway Preference: Career vs Postgraduate**
Thomas Li, Veronica Qiao, Valencia Sufanto
International Business Administration Program, Tunghai University International College
- R-10 **How Nike's Products Impact Consumer Purchase Willingness Through Quality**
Zhang Junjie and Zou Yunfan
International Business Administration Program, Tunghai University International College
- R-11 **Student Satisfaction with Campus Facilities and Services**
King Lee
International Business Administration Program, Tunghai University International College
- R-12 **Early Morning Class**
Angel Zheng, Suggie Yan, Christy Lin, Jocelyn Luo
International Business Administration Program, Tunghai University International College
- R-13 **An Investigation of Microplastics in The Flesh of Commercial Fish in Taiwan**
Alec Betancourt
International Business Administration Program, Tunghai University International College
- R-14 **Exploring Place-making from the Perspective of Collaborative Governance- A Case of Rural Areas in Yunlin County**
Wei Jung Shu
Department of International Affairs, Wenzao Ursuline University of Languages

Program in Detail

- R-15 **Bio Based Supplements and Nanotechnology in Alzheimer's Disease Detection and Treatment**
Edison Wei
Sustainability Science and Engineering Program, Tunghai University International College
- R-16 **What Transportation Do Students in Tunghai Take to Come to School**
JT Lin and Alan Huang
International Business Administration Program, Tunghai University International College
- R-17 **From Hobby to Community: The Positive Effects of Cosplay**
Amy Xiang
International Business Administration Program, Tunghai University International College
- R-18 **Fluorescent Detection of Mercury (II) Ions based on Folded poly (thymine)- Induced Off-Target Effect of CRISPR-Cas12a**
Chen Ya Yu
Department of Chemistry, Tunghai University
Murali Mohana Rao
Department of Chemistry, University of Massachusetts, Amherst (USA)
David Septian Sumanto Marpaung
Department of Biosystems Engineering, Institut Teknologi Sumatera (Indonesia)
Chuang Min Chien
International Ph. D. Program in Biomedical & Materials Science, Tunghai University
- R-19 **Perceptions and Concerns of Taiwanese on Fukushima Nuclear Food Imports**
Lena Zhang, Remi Liu, Jamie Zhang, Sandy Huang
Department of International Affairs, Wenzao Ursuline University of Languages
- Expository Posters
- E-01 **Missing Home or Missing Food? Exploration Eating Behavior and Nostalgia among International Students**
Jatnipit Koedklang
International Business Administration Program, Tunghai University International College
- E-02 **Get What you Pay for Matter? An Experiment Study of Option Framing Strategies and Flight Duration on Gen-Z Purchase Intention in Low-cost Carriers**
Kamonthat Pianporncharoen and Siphesihle Sinethemba Dlamini
International Business Administration Program, Tunghai University International College
- E-03 **The Impact of Digital Native Consumer to Use E-services in Taiwanese Airline Companies**
Tina Lo
International Business Administration Program, Tunghai University International College
- E-04 **Effective Advertising and Promotion with Color and Fonts in Food Delivery Apps**
Aaron Huang and William Zheng
International Business Administration Program, Tunghai University International College
- E-05 **Navigating the COVID-19 Pandemic: Understanding the Interplay of Panic Buying, Perceived Scarcity and Fear Among Indonesian Early Middle-Aged Consumers**
Alicia Junita and Michael Pangestu
International Business Administration Program, Tunghai University International College
- E-06 **Uniform Perception: Exploring the Impact of Company Attire on Employee Attraction Toward Jobs**
Tzu Lin Chen and Ai Zhen Wang
International Business Administration Program, Tunghai University International College
- E-07 **Soap Making: A Practical Exploration of Chemistry**
Tereza Balounová
International Business Administration Program, Tunghai University International College

Program in Detail

- E-08 **Living in the Silicon Age: The Impact of Semiconductor Technologies**
Gracia Intan Permatasari
International Business Administration Program, Tunghai University International College
- E-09 **Semiconductors Nanocrystal Properties Overview**
Anne Cheng, Joy Anjora, Christy Caroline
Sustainability Science and Engineering Program, Tunghai University International College
- E-10 **The Sea Turtles and Us: Ensuring a Future for Taiwan's Marine Life**
Vonny Cristina Tan and Tereza Balounová
International Business Administration Program, Tunghai University International College
- E-11 **Developed Strategies to Help a Company Achieve Corporate Sustainability**
Shen Yuan Lee
International Business Administration Program, Tunghai University International College
- E-12 **Internship Experience at Mt. Stonegate: Let's Build a Greener World Together**
William Daniel
Sustainability Science and Engineering Program, Tunghai University International College
- E-13 **Beyond Combat: An Exploration into The Utility of Pacifism in Video Games**
Alexandria Fermin and Alec Betancourt
Sustainability Science and Engineering Program, Tunghai University International College
- E-14 **Per- and Polyfluoroalkyl Substances & Human Health: An Overview of Exposure Risks and Health Impacts of PFAS Toxicity**
Alexandria Fermin
Sustainability Science and Engineering Program, Tunghai University International College
- E-15 **Essence of Liquid Ruby**
Connie Yeh, Justin Chen, Catherine Lin
International Business Administration Program, Tunghai University International College
Charlie Miller and Lexa Bennett
Dietrich School of Arts and Sciences, University of Pittsburgh (USA)
- E-16 **Da Yu Ling Oolong**
Yun Hsi Hsieh, Yu Luen Lee, Tsan Yang Tsai, Tzu Lin Chen
International Business Administration Program, Tunghai University International College
- E-17 **When Does a Game Stop Being a Game?**
Brian Wang and Qian Yuqi
International Business Administration Program, Tunghai University International College
- E-18 **The Synthesis and Application of MXene Electrocatalysts in Hydrogen Evolution Reaction: A Review**
Georgia Fuh
Sustainability Science and Engineering Program, Tunghai University International College
- E-19 **The Scientific Landscape of Alishan Tea**
Tiffany Li, Mito Kakizaki, Cherlynn Xiao
International Business Administration Program, Tunghai University International College
Betsy Little and Elijah Rohrbaugh
University of Pittsburgh (USA)
- E-20 **A Taste of Four Season**
Ann Lu, Jenny Yang, Yirong Li
International Business Administration Program, Tunghai University International College
Romeo Santino Norris
Department of Sociology, Davidson College (USA)
Star Jessica Sulkowski
International relations and International Studies, University of Pittsburgh (USA)

Program in Detail

- E-21 **“Delicate Spring” introduction to LISHAN Oolong tea**
Grace Fleming and Grace Lemelin
Khoury College of Computer Science, Northeastern University (USA)
Brian Lee, Lulu Chang, Veronica Chiao
International Business Administration Program, Tunghai University International College
- E-22 **From Leaf to Cup: Exploration of Green Tea in Taiwan**
Niko Kinjo, Jennifer Wang, Sophia Ma
International Business Administration Program, Tunghai University International College
Cate Corry
Colorado School of Mines (USA)
Flor Martinez
Sonoma State University (USA)
- E-23 **Translating Song Jingyi's Prose Piece 雅量 (Benevolence)**
Corrine Fu, Angel Cheng, Yuqi Zhu Kitty, Jessica Yu
International Business Administration Program, Tunghai University International College
- E-24 **Translation of "認識日本百年傳統習俗與相撲"**
Sarano Takeyama
International Business Administration Program, Tunghai University International College
Juliana Landefeld
Colorado School of Mines (USA)
Raymond Watters
University of Pittsburgh (USA)
- E-25 **風水字源: Terminology of Feng Shui**
Stephan Phillip, Jason Anderson, Nicole Herax
International Business Administration Program, Tunghai University International College
- E-26 **Magnitude 5.8 Earthquake in Hualien!**
Emily Yang, Mark Cai, Tina Chen, Zarka Ruan
International Business Administration Program, Tunghai University International College
- E-27 **Taiwan's Challenge in Achieving the 2050 Net Zero Society**
Jalal Algayda, Paween Hongpraprom, Siyabomga
National Taichung University of Education
- E-28 **Hanoi Free Tour Guides (HFTGs)**
Tania Listya, Sandy Lam, Phan Huynh Thi Bich Duyen
National Taichung University of Education
- E-29 **Renewable Energies**
Vong Hung Luan, 郭艳诗 Quach Uyen Thy, 裴范玉何 Bui Pham Ngoc Ha
National Taichung University of Education
- E-30 **Aquaculture Production Sector in Taiwan -- An Overview**
Kate Zhang
Sustainability Science and Engineering Program, Tunghai University International College

Project Session 2: High School Posters (12:30 – 14:30)

Research Posters

- R-20 **The Study of Verbal Form of Sexual Harassment**
Jimmy Jian, Peter Li, Ryan Zhang, Billy Nian
Taoyuan Municipal Shou Shan Senior High School

Program in Detail

- R-21 **ChatGPT Human Job Displacement Survey in Taiwan: A Comparative Perspective between Insiders and Outsiders**
Lulu Yang, Charlie Liao, Eva Zhao, Sharon Jian
Taoyuan Municipal Shou Shan Senior High School
- R-22 **Survey on the Human Euthanasia Legalization in Taiwan**
Tina Tian, Betty Qiu, Lisa Zhang, Erica Chen
Taoyuan Municipal Shou Shan Senior High School
- R-23 **A Survey on Taiwanese's Willingness to Buy on Japan Nuclear Food**
Tina Li, Sylvia Qiu, Sandy Chen
Taoyuan Municipal Shou Shan Senior High School
- R-24 **A Comparative Study of the MeToo Social Movement Impact on the Campus Interpersonal Distance**
Felix Huang, Jenny Zheng, Aubery Weng, Wade Dong
Taoyuan Municipal Shou Shan Senior High School
- R-25 **A Survey on the Pedestrian Hell in Taiwan**
Irene Li, Vivian Ma, Alma Zhang, Yumi Zhang
Taoyuan Municipal Shou Shan Senior High School
- R-26 **A Comparative Study of Traditional Learning Versus Online Learning on the Effect of English Vocabulary**
Karen Lu, Sophia He, Mandy Wu
Taoyuan Municipal Shou Shan Senior High School
- Expository Posters
- E-31 **The Zero-killing Policy for Stray Animals is Inadvertently Harming Native Species and Disrupting Ecosystems.**
Yuri Lin, Chloe He, Irene Huang, Winnie Cai
Taichung Municipal Shi-Yuan Senior High School
- E-32 **Fun Facts About Oarfish**
Ashley Huang, Amber Chen, Selene Zhang
Taichung Municipal Shi-Yuan Senior High School
- E-33 **Should Taiwanese Students Have Mental Health Leave?**
Chiang Yun En, Chen Szu Yun, Chen Qiao Yan, Shin Ying Lin
Taichung Municipal Shi-Yuan Senior High School
- E-34 **Why Are Taiwanese People Afraid of Radiation in Food?**
Chuck Wang, Terry Ng, Kenny Chen, Tung Wang
Taichung Municipal Shi-Yuan Senior High School
- E-35 **Sea Nomad in Sabah**
Lai Yi Sin
Taichung Municipal Shi-Yuan Senior High School
- E-36 **The Reasons Behind Nazi Violence**
Annie Chen, Anna Hu, Ellie Liu
Taichung Municipal Shi-Yuan Senior High School
- E-37 **Viewers Should Have More Media Literacy Skills**
Debra Xu, Iris Su, Doris Chen, Zoey Wang
Taichung Municipal Shi-Yuan Senior High School
- E-38 **The Protection of Leopard Cat**
Sophi Chen, Ginny Huang, Jeremy Wang, Daniel Chen
Taichung Municipal Shi-Yuan Senior High School

THURSDAY, JUNE 20

Parallel Oral Presentation Sessions 1 (13:00 – 14:30)

Session 1A (Business/Management)

- 1 **Toward the Excellence in Entrepreneurship Education and Ecosystem: The Model of Virginia Tech**

Chien-Chi Tseng, Associate Professor

Department of Management, Virginia Tech (USA)

- 2 **ChatGPT on the Rise: A Bibliometric Analysis of a Disruptive Technology**

Hen Kai Wah, Assistant Professor

International Business Administration Program, Tunghai University International College

- 3 **The Impact of Pandemic Conditions on Burden among Family Caregivers: An Empirical Framework**

Carol Troy, Assistant Professor

International Business Administration Program, Tunghai University International College

Moderator: Dr. Mrinalini Mishra

Session Host: Abbie Olson

Session 1B (Literature/Film)

- 1 **Qi, Yin-yang, and Discourses on Androgyny, Sexed Bodies, and Anomalies in Traditional Chinese Medicine**

Ying-Hsiu Lu, Assistant Professor

International Business Administration Program, Tunghai University International College

- 2 **“HEAL” Film Screening: The Importance of Education and Humanization in Conflict**

Mian Adnan Ahmad, Filmmaker / Lecturer

M.A.A.K Pictures / Loyola Marymount University (USA)

Moderator: Dr. Hao-Cheng Chen

Session Host: Alan Lin

Parallel Oral Presentation Sessions 2 (14:50 – 16:20)

Session 2A (Education)

- 1 **Passing Calculus: How Good is “Good Enough?”**

Carol Troy, Associate Professor

International Business Administration Program, Tunghai University International College

- 2 **Counting the Costs of Academic Censorship**

Dimitar Gueorguiev, Associate Professor and Director of Graduate Studies

Political Science Department, Syracuse University (USA)

Moderator: Dr. Carol Troy

Session Host: Abbie Olson

Session 3B (Sustainability)

- 1 **Human Capital Dynamics and Sustainable Growth in Japanese Professional Service Firms: The Paradox of Experience Diversity**

Howard Chen, Assistant Professor

International Business Management Program, Tunghai University International College

Program in Detail

Shohei Funatsu, Assistant Professor

Graduate School of Economics, University of Tokyo (Japan)

Hiroki Noguchi, Associate Professor

Faculty of Economics and Business Administration, University of Fukushima (Japan)

- 2 **Does local government's Renewable Energy Policy promote corporate Green Technology Innovation? Empirical analysis of Patent Data**

Kajal Panwar and Yessica C.Y. Chung, Associate Professor

International master's degree Program in Agribusiness Management, National Pingtung University of Science and Technology

- 3 **Sustainable Iridium Oxide (IrO_xnH₂O) Catalyst for Oxygen Evolution Reaction**

Lin Zih-Syun, Ph. D. Student and Min-Chieh Chuang, Professor

Department of Chemistry, Tunghai University

Moderator: Dr. Timo Eccarius

Session Host: Alan Lin

Closing Ceremony (16:00 – 16:45)

Project C-1

Freezegether

Alan Huang, Shelby Su, Coco Guo, Ann Chen

International Business Administration, Tunghai University International College

Abstract

This project introduces FREEZEGETHER, a shared, coin-operated refrigeration system designed to address the challenges of temporary cold storage in public and communal environments. The system provides secure, individual storage spaces that prevent theft, contamination, and inconvenience associated with shared refrigerators. By enabling easy access through card-based payment and utilizing green energy sources, FREEZEGETHER offers a practical, flexible, and environmentally sustainable solution for schools, dormitories, offices, and commercial spaces.

Project V-1

The Struggle is Real: The Hilarious Realities of International Student Life in Taiwan

Miu Tobise and Vonny Cristina Tan

International Business Administration, Tunghai University International College

Abstract

For the Short Video Projects of the ICIC 2024 Conference, we chose the topic of showcasing the daily lives of international students in Taiwan. This short video aims to capture the authentic experiences of college students in Taiwan, especially the international students. The narrative jumps on the popular "We're college students in Taiwan, of course we will..." trend to showcase relatable scenarios of their daily lives.

Energetic students introduce themselves and the theme. We see them working on part time jobs, seamlessly separating trash into color-coded bins, playfully chasing the garbage truck if they miss collection, and so on. Upbeat music and a fast-paced editing style keep the video engaging, while capturing the essence of both the humor and challenges faced by international students in Taiwan. The video concludes with the students sharing a laugh, acknowledging the whirlwind of their studying abroad lives while embracing the journey in Taiwan.

Project V-2

Circular Economy

Huang Zi Qi, Cheng Wei Jen, Tzu-Lin,Chen, Wang Ai Zhen

International Business Administration, Tunghai University International College

Abstract

After our lessons, we discovered that while people often consider themselves sustainable, their actions typically only scratch the surface. What does it really mean to be circular? How can we truly achieve sustainability? This video contains our findings from spending a day as farmers in Yunlin.

Project V-3

Furniture Daddy: Just Rent It!

David Hsu, Tina Lo, Samuel Liu, Cindy, Anne Zheng, Jessica Zhan, Nadia Li, Deven Ken, Chien-Chi Tseng

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

The project presents a business model for a furniture rental company designed to cater to the evolving needs of modern consumers seeking flexibility, sustainability, and targeting costumers who are renting a place. The proposed model emphasizes a subscription-based service that allows customers to rent high-quality furniture on a short-term or long-term basis. Key elements include an online platform and furniture warehouse easy browsing and selection, diverse rental packages tailored to different customer segments, and efficient logistics for delivery and maintenance.

Project V-4

All-You-Can-Party

Amy Hsiang, Shalom Mega, Nikolai Debrito, Nathaniel Bertram, James Prayogo, Irene lin, Aixa contreras, Estrella Tatiana

International Business Administration Program, Tunghai University International College

Abstract

Everyone likes attending parties and events occasionally, whether it's a birthday party, a wedding day, or even a business meeting. But some people have a hard time organizing these parties or events. This business model aims to ease the process of organizing parties and events and offer benefits to return or loyal customers. The customer has a lot of options to choose from in purchasing a onetime party or event package, from venue listing, and decorations, to personnel like bartenders, DJs, and servers. Returning or loyal customers can also get many benefits like discounts after purchasing a certain number of packages.

We as a company wants to hire the best possible venue listings and personnel, we care about the needs and wants of our customers which leads us to work with them on what their dream party/event process would be, while keeping it cost effective and resource-efficient for event planning and rentals for the company.

Project V-5

The Beauty of Taiwanese Nature: Through the Eyes of a Foreigner

Tereza Balounová

International Business Administration Program, Tunghai University International College

Abstract

In this video project, I will explore Taiwan's beautiful natural landscapes and rich cultural heritage, speaking in simple Chinese as part of my language learning journey. My goal is to inspire both Taiwanese and foreigners to appreciate and protect the natural beauty of Taiwan, and to share my love for the island.

The video begins with a self-introduction and an overview of Taiwan's geography. After that, I will dive into specific topics including mountains, seas and coastal areas, national parks, and the unique animals of Taiwan.

The first part will be about Taiwan's majestic mountains and the indigenous people who reside in these mountainous regions. There will be a brief mention of mountain agriculture, including tea farms and strawberry farms. I will also focus on the hiking culture in Taiwan and share my personal experiences.

Next, I will move to Taiwan's coastal areas, exploring the distinct characteristics of the island's seas and oceans. This section covers the cultural significance of coastal communities, including fishing traditions and sea god worship. I will also introduce popular seaside destinations and my favorite coastal spots.

The video will then focus on Taiwan's national parks and natural reserves, highlighting the most famous places and the activities that tourists enjoy there. I will also talk about my own experiences visiting these places.

The last main part of the video will showcase the unique animals native to Taiwan, such as the Formosan black bear and monkeys. The discussion will include conservation efforts to protect endangered species, like sea turtles in Xiaoliuqiu. I will highlight the best locations to observe animals in their natural habitats and recommend top spots for animal tourism in Taiwan.

The video concludes with a summary of key points and an inspirational message. This project should inspire the connection between people and the environment.

Project V-6

Tuku Cucumber Farm

Jatnipit Koedklang

International Business Administration Program, Tunghai University International College

Abstract

Environmental, social and governance considerations are crucially important in the agricultural industry. They benefit local communities, encourage ethical labour practices, reduce negative environmental effects and improve the governance.

The agricultural industry may support social progress and environmental protection.

ESG factors also help agribusinesses fulfilling changing customer demands for ethical and sustainable products and reduce risks related to climate change and resources scarcity. At Tuku Cucumber Farm, they are committed to environmental, social, and governance practices. From seed to market, their cucumbers are grown with care and dedication. They use organic methods to protect the environment and conserve practices by using their own farm vehicle. They also maintain and enhance soil quality, involve in crop rotation, and protecting water resources can all be accomplished through implementing irrigation technology such as water recycling systems.

Project V-7

Perceptions of Online Experiences During the Covid-19 Pandemic

Martin Cai, Sharlyn Yu, Angelina Qiu

International Business Administration Program, Tunghai University International College

Abstract

This study examines Taiwanese students' perceptions of online learning during the COVID-19 pandemic using a sequential exploratory design. Initial qualitative interviews with 18 participants from different educational levels were conducted to identify key themes, which then informed the development of a follow-up survey. The findings reveal a complex balance of advantages and disadvantages associated with online education. While students reported increased convenience, greater access to digital learning tools, and in some cases higher academic performance, negative experiences were more prevalent, including reduced face-to-face interaction, feelings of isolation, technical difficulties, and decreased concentration. Survey results suggest that although many students achieved higher grades—possibly due to more lenient grading standards—they also believed they learned less and retained less knowledge compared to traditional in-person classes. Preferences for face-to-face learning remained strong, particularly due to the value of social interaction. Differences across educational levels were also observed, with older students reporting higher grades but lower perceived learning outcomes, while younger students experienced minimal changes. Overall, the study highlights a trade-off between flexibility and learning effectiveness, suggesting that online education, while beneficial, cannot fully replace traditional classroom experiences.

Project V-8

Identifying Factors in Influencing Car Ownership in Taiwanese and Indonesian Household

Ryo Chen and Nicole

International Business Administration Program, Tunghai University International College

Abstract

This study examines the determinants of car-related satisfaction among households in Indonesia and Taiwan, focusing on fuel efficiency, environmental impact awareness, and public transportation availability. Using regression analysis, the results reveal significant regional differences. For Indonesian households, the model explains approximately 67% of the variation in satisfaction. Public transportation availability is the only statistically significant factor, while environmental impact awareness is marginally significant and fuel efficiency is not significant. In contrast, the model explains only 14% of the variation for Taiwanese households, and none of the examined factors are statistically significant, suggesting that other unmeasured variables may be more influential. These findings highlight the importance of contextual differences in consumer behavior. Public transportation infrastructure appears to play a key role in Indonesia, whereas satisfaction in Taiwan may depend on a broader set of factors. The study suggests that region-specific strategies are essential for policymakers and firms.

Project V-9

Stage Fright

Shalom Mega

International Business Administration Program, Tunghai University International College

Abstract

Stage fright is the fear or worries that come in during or before presentation. Public speaking is an important skill that need to be impacted or practiced among the students. To compete in the market for jobs or any productive activity, you need to have such skills. There are a lot of factors that contributed to stage fright as being studied during qualitative survey, and in these contents, I analyze further. It is an area of interest to understand if fellow students feel the same and how best to deal with.

Research Session: Poster R-1

Transparent Wood as a Potential Construction Material: Exploring Opportunities of Indoor Air Purification and Building Integrated Photovoltaics

Christiane Kalamelu

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

In the pursuit of reducing energy use and emissions, the construction sector seeks eco-friendly, sustainable, and renewable materials. Natural wood, recognized for its sustainability, can play a pivotal role in creating future sustainable built environments. Transparent wood, a novel wood-based material, has garnered attention for its unique properties, making it a promising candidate for functionalized building materials.

The process of creating transparent wood involves several steps. Wood samples (1 cm × 1 cm × 0.3 cm) are dried at 60 °C for 3 h before submersion in a NaClO₂ solution (1.5-6 wt%) with an acetate buffer (pH 3-4) and treated at 75 °C for 5-20 hours to achieve delignification. Subsequently, methyl methacrylate (MMA) monomer is pre-polymerized at 75 °C for 15 minutes using 0.3 wt% Azobisisobutyronitrile (AIBN) as an initiator. The delignified wood (DW) is impregnated with this polymer solution, degassed for 30 minutes, and then sandwiched between glass slides for polymerization at 75 °C for 2 h. To enhance functionality, TiO₂ (P25) nanoparticles are dispersed in the pre-polymerized MMA solution, impregnating the DW with both PMMA and TiO₂.

Extensive testing indicates that NaClO₂ concentrations between 1.3 and 3 wt% are optimal for achieving desired transparency without compromising structural integrity. Higher concentrations may weaken the structure, while lower concentrations may fail to achieve adequate transparency. Results show that the transparency of delignified wood increases its light transmission capacity. Moreover, the integration of TiO₂ nanoparticles enhances the wood's ability to harness UV light, presenting opportunities for sustainable lighting solutions and passive air purification systems.

In conclusion, transparent wood represents a significant advancement in sustainable construction materials, offering benefits such as enhanced lighting and air purification. This innovative material holds great potential for future eco-friendly building applications.

Research Session: Poster R-2

Students' Opinions on Formats of Final Assessment

Kseniia Dubinina

International Business Administration Program, Tunghai University International College

Abstract

Final exams are important for checking how well students understand the course material. It's important to know what students think about different types of exams because the right type can make learning better or more confusing. This research will look at students' opinions and preferences for different types of exams in management courses. The types of exams include final presentations, oral tests, multiple choice tests, and written essays. The goal is to find out which types of exams students prefer, and think is the best for their learning.

Research Session: Poster R-3

Dining Preferences among THU Students

Miu Tobise, Gloria Liu, Doris Shi

International Business Administration Program, Tunghai University International College

Abstract

The purpose of the survey is to analyze the preferences of dining habits among students in Tunghai University. We collect opinions from students through face-to-face interviews and online Google Form surveys. The responses will be categorized into constructions and Likert items. The results will display the different preferences and the most common preferences.

Research Session: Poster R-4

Would International Undergraduate Rather Stay or Leave Taiwan After Graduation?

Enzel Viana Sembiring and Stefanie Hanry

International Business Administration Program, Tunghai University International College

Abstract

This study investigates the determinants of international students' post-graduation intentions. Qualitative interviews of 20 students were followed by quantitative surveys of 37 other students. We tested three hypotheses: perceived graduate study career pays off (PGSCP) boosted post-graduate study intentions (PGSI), networking (NW) opportunities increased post-graduate work intentions (PGWI), and Mandarin Chinese (MC) proficiency increased post-graduate work intentions. The responses were measured on a 5-point Likert scale and demographic variables of six student characteristics: university, major, grade, nationality, location in Taiwan, gender, and age.

Research Session: Poster R-5

Research Proposal: Student Works Part Time Jobs

Lay Sophy, Simba Turkmenova, James Wong

International Business Administration Program, Tunghai University International College

Abstract

This study explores the prevalence, motivations, and impacts of part-time employment among students. Through a mixed-methods approach, including surveys and interviews, the research examines how part-time jobs affect academic performance, time management, and personal development. Findings indicate that while financial necessity is the primary driver for seeking employment, students also gain valuable skills and experience. However, balancing work and study poses significant challenges, often leading to stress and reduced academic achievement. The study concludes with recommendations for institutions to support working students, emphasizing the need for flexible scheduling and resources to mitigate the negative impacts on their educational pursuits.

Research Session: Poster R-6

Impact of COVID-19 on Health and Well-Being

Haku Batdelgur and Wukong Hu

International Business Administration Program, Tunghai University International College

Abstract

Our research encompassed both qualitative and quantitative surveys to comprehensively understand the impact of COVID-19 on individuals' physical and mental health.

Qualitative Survey: Titled "Impact of COVID-19 on Physical and Mental Health in Daily Life," this survey delved into participants' experiences during the pandemic. Through semi-structured interviews, we explored themes such as changes in physical activity, sleep patterns, access to healthcare, and coping strategies. Findings revealed disruptions in physical health and mental well-being, emphasizing challenges like reduced activity, altered sleep, delayed healthcare, increased stress, anxiety, and feelings of isolation.

Quantitative Survey: Titled "Quantifying the Impact of COVID-19 on Health and Well-being," this survey employed a Likert scale questionnaire. It quantified weight changes, eating habits, social isolation, stress levels, physical exercise frequency, and mental health service utilization during the pandemic. The data provided statistical insights into these aspects, complementing qualitative findings and offering a comprehensive view of the pandemic's effects.

Together, these surveys shed light on the multifaceted impact of COVID-19, guiding targeted interventions, policy decisions, and resource allocation for improving health outcomes in similar contexts.

Research Session: Poster R-7

A Simple Tip That Will 100% Increase Your GPA

Sean Darren and Bertram Chandra

International Business Administration Program, Tunghai University International College

Abstract

The perceptions of Taiwanese and foreign teachers by university students in advanced English content courses have always been a subject of disagreement. This is largely because students don't often discuss it, as they are unsure how to articulate their thoughts. This survey aims to study the impact of native and foreign teachers on students' learning effectiveness in advanced English content courses. An online questionnaire was conducted among 40 students using a mixed methods design. The respondents were divided by nationality (foreign and Taiwanese students) and gender.

The questions asked by the interviewer in the qualitative phase of the research explored students on the professionalism, efficiency, and English proficiency of foreign and Taiwanese teachers. The interviews were recorded and lasted from 3-10 minutes, and they were conducted in an offline and comfortable environment so that the interviewee was comfortable answering the questions. After carefully examining the answers, we constructed the hypotheses that international students preferred foreign teachers to Taiwanese teachers and Taiwanese students preferred Taiwanese teachers to foreign teachers. We tested those hypotheses in the quantitative phase of the research, including an online Likert survey. The quantitative part of the research includes an online survey using the Likert construct. The survey consisted of 18 questions divided into 3 constructs: Teacher professionalism, teacher English proficiency, and teacher teaching methods. We expect the results to be consistent with the hypotheses.

In conclusion, the main goal of this project is to get an idea of the students' perceptions regarding Taiwanese and foreign teachers in a very civilized, neutral, and non-biased way, so that the results will be sensitive to all sides of the questions.

Research Session: Poster R-8

A Research Poster About Physical Learning v.s. Online Learning: Preferences of the Whole THU Students

Yirong Li and Jason Jian

International Business Administration Program, Tunghai University International College

Abstract

This research explores the hypothesis that social life significantly affects academic performance in physical versus online learning environments. Focusing on students at Tunghai University, we aim to understand how varying degrees of social interaction in these two modalities impact educational outcomes.

To gather data, we conducted interviews with students and distributed Google Forms to collect quantitative and qualitative responses from participants. Our methodology allows for an in-depth analysis of student experiences and perceptions regarding the role of social life in their academic performance.

Research Session: Poster R-9

Pathway Preference: Career vs Postgraduate

Thomas Li, Veronica Qiao, Valencia Sufanto

International Business Administration Program, Tunghai University International College

Abstract

This research will investigate the factors that influence the decisions of Tunghai University students regarding further education versus entering the workforce upon graduation. The focus of the study is divided into 3 main determinants: financial motivations, educational priorities, and the influence of internships or work experience.

Data collection among students for all major and department at Tunghai University is currently ongoing. The sample is 32 so far, with the aim of at least 40 completed questionnaires. The questionnaire covers inquiries dealing with financial considerations, attractiveness to further education, and the role of internships or work experiences. For example, questions asked deal with the influence of financial factors toward their choice of work versus further study and the probable influence of scholarships toward the inclination to pursue a master's degree.

Initial findings show that financial motivations play a huge role in influencing students toward immediate employment. Most are concerned with probable salary and job market stability. A scholarship and financial aid also strongly affect further education decisions. Furthermore, students with internship experience are relatively more ready and confident to enter the workforce right after graduation.

Initial results indicate that financial incentives, educational opportunities, and practical work experience play a crucial role in shaping post-graduation plans for students. Understanding such factors can help academic advisors and policymakers design more effective support systems for students so that they make informed decisions about their objectives and experiences.

Research Session: Poster R-10

How Nike's Products Impact Consumer Purchase Willingness Through Quality

Jay Zhang and Ivan Zou

International Business Administration Program, Tunghai University International College

Abstract

This study investigates consumer perceptions of the value and quality of Nike's products, focusing on how these perceptions influence purchasing decisions. An online survey was administered to seven participants aged between 19 and 26 years old. The sample consisted of 52% female and 48% male respondents. The survey evaluated three key areas: the durability of Nike products, the perceived value for money, and the influence of perceived quality on purchase decisions, each rated on a scale from 1 to 5.

Results showed that 36% of participants rated the durability of Nike products as meeting their expectations at a level of 3 and 4, while 24% rated it at the highest level of 5. Opinions were more varied regarding the value for money, with 28% rating it at 3 and another 16% at 4. Responses were mixed about the perceived quality influencing purchase decisions, with 28% giving a rating of 2, and the remaining responses spread equally across ratings of 1, 3, 4, and 5. These findings indicate a diverse range of opinions among consumers regarding Nike's product value and quality. While some consumers perceive high durability and value for money, others are less convinced of these attributes. Understanding these varied perceptions can help Nike tailor their marketing strategies and product development to better meet consumer expectations and enhance their purchasing experience. The diversity in consumer feedback highlights the complexity of market preferences and underscores the importance of nuanced marketing approaches. By recognizing the segments of their customer base that are satisfied with product durability and value, Nike can reinforce these positive attributes in their promotions. Conversely, addressing the concerns of less satisfied customers by improving perceived quality can foster greater brand loyalty. This research provides valuable insights that can assist Nike in refining their product offerings and communication strategies to align more closely with consumer needs, thereby driving sales and improving overall customer satisfaction.

Research Session: Poster R-11

Student Satisfaction with Campus Facilities and Services

King Lee

International Business Administration Program, Tunghai University International College

Abstract

Students' satisfaction with school has significant impact on school's enrollment rate, Tung Hai is a university which has long history, and schools in Taiwan right now is facing low birth rate, the competition between schools is getting more intense, the birth rate is decreasing every year.

There's importance to treat present students right, so we use qualitative method to collect our data.

Research Session: Poster R-12

Early Morning Class

Angel Zheng, Suggie Yan, Christy Lin, Jocelyn Luo

International Business Administration Program, Tunghai University International College

Abstract

Early morning classes have been a long-standing discussion in universities in Taiwan. While some people concerned about the impact on students' health and academic performance, others consider personal preferences and cultural traditions. Recently, our team conducted a survey to provide insights on reconsidering school start times and the effects of early morning classes on students.

This survey aimed to understand the views, experiences, behaviors, and feelings of university students at Tunghai University and other Taiwanese universities regarding early morning classes. By gathering insights through interviews, Google Forms, and Likert scale ratings, this research explored how early classes affect students' daily lives and performance.

To collect responses, we conducted offline and online interviews with 20 university students from different institutions. Additionally, a Google Form was used to obtain open-ended responses about students' performance in early morning classes, with participants aged 20-26, 66.7% female and 33.3% male, all from Tunghai University.

The survey utilized a Likert scale to measure students' agreement or disagreement with statements about early morning classes. After collecting the data, we calculated the reliability by using Cronbach's Alpha, which showed a high score of 0.87, indicating good consistency.

The open-ended questions revealed varied perspectives. Some students found it challenging to wake up early and stay focused due to lack of sleep and fatigue, while others appreciated the discipline and routine of early classes. These findings were supported by the survey data, with many students expressing neutral or disagree views about attendance, concentration, and participation in early morning classes.

According to the hypotheses, the survey conclusions highlighted students' concerns about the impact on academic performance, mental health, and extracurricular activities. However, some students preferred later start times, like 10 a.m. or later, believing it would better align with their sleep patterns and enhance their learning experience.

Research Session: Poster R-13

An Investigation of Microplastics in The Flesh of Commercial Fish in Taiwan

Alec Betancourt

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

The pervasiveness of microplastics (MPs) has raised concerns over the effects it has on organisms, ecosystems, and human health. MPs are known to be able to bioaccumulate and biomagnify. This is especially the case for aquatic organisms. Concerningly, communities like Taiwan where there is a culture of consuming large amounts of seafood, are most at risk. Recent research showed MPs are common among marine coastal fish in Southern Taiwan around Hengchun Peninsula, where Kenting National Park is situated (Chen et al., 2021). Therefore, the aim of the research was to investigate the presence of MPs in the edible parts of fish in Taichung, Taiwan.

Research Session: Poster R-14

Exploring Place-making from the Perspective of Collaborative Governance- A Case of Rural Areas in Yunlin County

Wei Jung Shu

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Abstract

Taiwan faces an increasingly severe demographic issue, with the population excessively concentrated in urban areas. Meanwhile, rural areas are grappling with a shortage of labor force and a significant aging population. In response, the National Development Council (NDC) announced the Place-making Policy in 2019, aiming to encourage proactive thinking at the local level to drive regional industrial development. The goal is to attract the younger population back to rural areas, promote internal migration within Taiwan, and alleviate the excessive population concentration in urban areas. This study focuses on rural communities, examining the effectiveness of the government's regional revitalization efforts and the issues associated with this development.

The results indicate a lack of policy continuity, with an emphasis on short-term results. In rural settings, community organizations and private businesses often rely on government funding due to limited resources. Economic priorities significantly contribute to the limited success of rural community projects. To enhance effectiveness, it is imperative to adopt a collaborative, bottom-up approach with a focus on long-term development. It is only through a shared commitment to regional prosperity among various sectors and the people of Taiwan that sustainable development can be achieved.

Research Session: Poster R-15

Bio Based Supplements and Nanotechnology in Alzheimers Disease Detection and Treatment

Edison Qian

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

The convergence of bio-based health supplements and nanotechnology represents a groundbreaking approach in combating diseases, particularly Alzheimer's. Derived from natural sources like plants and marine organisms, bio-based supplements harbor potent bioactive compounds. For instance, research by I-Chen Li et al. demonstrates the neuroprotective potential of erinacine A-enriched *Hericium erinaceus* mycelia. Integration with nanotechnology elevates their efficacy, as nanoparticles enhance bioavailability and targeted delivery. This combination holds promise for treating Alzheimer's by facilitating early detection and precise treatment.

Nanotechnology-based diagnostic tools, detailed by Amir Nazem and G. Ali Mansoori, offer unparalleled sensitivity in detecting molecular biomarkers, enabling early diagnosis. Nano-carriers adeptly traverse the blood-brain barrier, efficiently delivering neuroprotective compounds to the brain, a feat crucial in neurological disorder treatment. Combining bio-based supplements with nanotechnology not only supports early detection but also provides innovative treatment avenues. Encapsulation of bioactive compounds like curcumin in nanoparticles enhances stability and neuroprotective effects, as observed in preclinical studies.

Moreover, rigorous safety evaluations, such as those conducted by Jui-Hsia Hsu et al., ensure the safe integration of bio-based supplements with nanotechnological applications. This integrated approach not only slows Alzheimer's progression but also holds potential for cognitive function restoration. In summary, the synergy between bio-based health supplements and nanotechnology heralds a transformative strategy for Alzheimer's detection and treatment, leveraging the natural therapeutic potential of bio-based compounds and the precision of nanotechnology for more effective healthcare solutions.

Research Session: Poster R-16

What Transportation Do Students in Tunghai Take to Come to School

JT Lin and Alan Huang

International Business Administration Program, Tunghai University International College

Abstract

In our research, we seek to understand and study how students decide their transportation to go to school. Whether they go to school by public transportation or personal transportation. We have done our research in two different approaches. We've done it with a qualitative approach and a quantitative approach. Each approach gives us various information that we need. For instance, we analyze and code the responses with a qualitative approach and collect data using Likert items.

We expect that Taiwanese students would choose a motorcycle as their transportation to visit school due to the convenience. On the other hand, international students would choose public transportation including buses as their primary choice for transportation. Our research also considered age as a factor of influence. We believe that students at younger ages wouldn't consider safety an important factor in choosing their transportation.

Research Session: Poster R-17

From Hobby to Community: The Positive Effects of Cosplay

Amy He

International Business Administration Program, Tunghai University International College

Abstract

In modern society, many people are socially isolated. Therefore, we must consider how individuals can find a way to make more connection with people outside of their workplace or school. This study explores whether cosplay, as a hobby, can be one of the solutions to social isolation, and make the hobby more than a hobby. Nine young respondents (teenagers and 20s) suggested that cosplay made them more confident and made them feel connected to a community with similar interests. They also discussed the reasons for participating in cosplay and the obstacles they faced. Interestingly, parents' attitudes impacted their participation during their student years; respondents said that their parents disagreed with participating in cosplay during that time.

Based on these interviews, a follow-up survey was conducted to test three hypotheses: 1) Cosplay increases participants' self-confidence; 2) Cosplay motivates participants to enhance their skills and abilities; 3) Cosplay helps participants build more connection with a community. A total of 40 individuals participated in the survey. The questionnaire included demographic variables (gender and age) and Likert constructs measuring confidence, motivation to learning new skills, and social connections. The statistical test supported all three hypotheses.

The results suggest that cosplay is beneficial for increasing confidence, motivation to learn, and social connections, indicating that a hobby may help relieve social isolation.

Research Session: Poster R-18

"Fluorescent Detection of Mercury (II) Ions based on Folded poly (thymine)- Induced Off-Target Effect of CRISPR-Cas12a"

Chen Ya Yu

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Department of Chemistry, University of Massachusetts, Amherst (USA)

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Abstract

Mercury ions (Hg^{2+}) is a highly toxic heavy metal pollutant to humans even at low concentrations. To ensure environmental sanitation and food safety, the Ministry of Environment in Taiwan (MOENV) has set the maximum allowable Hg^{2+} level in drinking water at approximately 0.001 mg/L. Preventive action through Hg^{2+} detection is critical, and recently, CRISPR-Cas12a-based biosensors have offered quantitative, sensitive, selective detection compared to conventional methods. However, existing methods remain involve a multi-step, laborious process, and require additional units/devices/reagents. Herein, we address these issues by elaborately designing the thymine (T)- Hg^{2+} -thymine DNA-induced off target effect of CRISPR-Cas12a for the detection of mercury ions. The UV-Vis and CD spectra reveal that a two-segment poly-T DNA activator (dipoly-T) exhibits T

Hg^{2+} -T formation with a Z-form DNA structure. Utilizing such folded DNA as an activator induces the off-target effect in the Cas12a enzyme, and with the elevation of Hg^{2+} concentration, the fluorescence signal yielded by trans-cleavage activity decreases, and allows this system to detect Hg^{2+} down to 5 nM, which is below the concentration limit set by the MOENV. Additionally, this system selectively distinguishes Hg^{2+} from other metals such as Mg^{2+} , K^+ , Fe^{3+} , Ca^{2+} , Na^{2+} , Mn^{2+} , and Zn^{2+} . Furthermore, the capability of this system to quantify Hg^{2+} in complex matrices has been successfully demonstrated in Hg^{2+} -spiked tap water and river water samples. These findings unveil a promising new biosensor platform for the application of CRISPR-Cas12a systems in detecting dangerous heavy metal ions in the environment.

Research Session: Poster R-19

Perceptions and Concerns of Taiwanese on Fukushima Nuclear Food Imports

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Abstract

On March 11, 2011, a severe nuclear disaster occurred in Fukushima, Japan. This incident led to the release of a large amount of radiation, severely contaminating local food. In February 2022, Taiwan announced that it would open imports from Fukushima and five other prefectures. The primary aim of this study is to deeply understand the views of the Taiwanese people regarding this decision. Research through a questionnaire survey, collecting 220 valid responses. Our survey focused on four main areas: the level of knowledge about Fukushima's nuclear food, the degree of concern, satisfaction with the government's import policy, and their purchasing behavior. Data were analyzed using SPSS, with a deep dive into the cognition section. Using independent sample t-tests and ANOVA, results showed that women generally had a higher level of knowledge than men; from a professional perspective, blue-collar workers were more knowledgeable than white-collar workers. Additionally, those who had previously purchased Fukushima nuclear food differed significantly in their level of knowledge compared to those who hadn't purchased or were unaware. Furthermore, concerning the level of attention, significant differences were found based on age and frequency of cooking. In terms of education, those with higher academic qualifications were more concerned about this issue. The research proves that there are significant differences in attitudes towards the import of Fukushima nuclear food among different groups, mainly influenced by their personal background and living environment.

Keywords: Taiwanese, Fukushima nuclear food, Food safety, Cognitive concerns

Expository Session: Poster E-1

Missing Home or Missing Food? Exploration Eating Behavior and Nostalgia among International Students

Jatnipit Koedklang

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Abstract

This study examines the influence of international study experiences on the dietary habits of college students. It explores how personal preferences, cultural influences, and contextual factors intersect to shape food choices among international students. By emphasizing the processes of cultural adaptation and psychological nostalgia, this study aims to uncover the complex dynamics that drive dietary preferences within cross-cultural academic settings.

Expository Session: Poster E-2

Get What you Pay for Matter? An Experiment Study of Option Framing Strategies and Flight Duration on Gen-Z Purchase Intention in Low-cost Carriers

Kamonthat Pianporncharoen and Siphesihle Sinethemba Dlamini

International Business Administration Program, Tunghai University International College

Abstract

The COVID-19 pandemic has significantly impacted global tourism, leading to decreased air travel and heightened budget-consciousness among travelers. In response, low-cost airlines have emerged as top choices for young travelers seeking affordability. This study delves into how Gen-Z consumers optimize their flight experiences through option framing strategies such as additive and subtractive framing. Additive framing enables customers to start with a basic package and customize it with desired services, while subtractive framing offers comprehensive packages with the flexibility to remove features. By addressing gaps in existing literature, the study provides insights into how option framing shapes consumer behavior. Understanding these dynamics allows for informed recommendations on product planning and sales strategies in the travel market, assisting airlines in meeting evolving traveler preferences effectively. This study will gather data from 240 Generation Z consumers, drawn from local and international student populations in Taiwan through experimental design. The results will empower low-cost airlines to refine their package marketing strategies, ensuring alignment with consumer needs and preferences in the post-pandemic landscape.

Expository Session: Poster E-3

The Impact of Digital Native Consumer to Use E-services in Taiwanese Airline Companies

Tina Lo

International Business Administration Program, Tunghai University International College

Abstract

The Taiwanese airline industry has faced several changes of serving process from physical services to E version, due to the technology and electronic development. This study focused on the influences that digital native consumers have brought to the airline organizations while using the E-services. In the beginning of the research, analyzing the general electronic services from both Taiwanese full-service airlines and low-cost airlines. This is followed by a literature review after assessing the E-services of Taiwanese airlines websites. The launch of the airlines websites electronic services has brought wide areas for consumers to operations. Due to the popularity of E-services and process simplification, clients or consumers desired a high level of service quality, which affected the airline corporate image directly.

Expository Session: Poster E-4

Effective Advertising and Promotion with Color and Fonts in Food Delivery Apps

Aaron Huang and William Zheng

International Business Administration Program, Tunghai University International College

Abstract

This research explores how colors and fonts in advertising affect how people feel and behave. We explore color associations and preferences, investigate the impact of color patterns on consumer perception, and assess their role in shaping purchasing decisions. Like the subtle nuances that contribute to the emotional branding of products through analysis of advertising design and incorporating principles of color psychology and cognitive response. We also study how patterns of colors in ads affect what people think about products and if they decide to buy them. By analyzing ads and using ideas from color psychology and how the brain responds, we show how small details can make products seem more appealing. Additionally, this research looks at fonts—the style of writing—and how they help show a brand's personality and make messages clear. We study how different fonts, sizes, and spacing affect what people think and how much they pay attention. By figuring out how fonts are used in food delivery apps, we learn how they help people remember and recognize specific brands. This research provides an insider look for marketers to create irresistible, eye-catching and heart stopping advertising campaigns that really connect with people and make them want to act. As the food delivery service industry becomes more and more saturated, the visual elements of advertising become crucial factors in shaping consumers' perceptions, preferences, and ultimately, their choices. The objective of this study is to offer a detailed comprehension of the ways in which these visual elements contribute to the overall perception of consumers.

Expository Session: Poster E-5

Navigating the COVID-19 Pandemic: Understanding the Interplay of Panic Buying, Perceived Scarcity and Fear Among Indonesian Early Middle Age Consumers

Alicia Junita and Michael Pangestu

International Business Administration Program, Tunghai University International College

Abstract

The COVID-19 pandemic has severely impacted Indonesia's economy, causing significant disruptions in purchasing habits. This study explores impulsive buying behavior among early middle-aged consumers, aged between 35-44, during the crisis, examining the influence of panic buying, perceived scarcity, and fear. Utilizing the Preacher-Hayes technique, reveals scarcity and panic buying as significant predictors of impulsive behavior. Additionally, the analysis involves consumer psychographic segmentation based on negative pandemic emotions, lifestyle, and purchasing habits.

Keywords: COVID-19, Panic Buying, Perceived Scarcity, Fear Appeals

Expository Session: Poster E-6

Uniform Perception: Exploring the Impact of Company Attire on Employee Attraction Toward Jobs

Tzu Lin Chen and Ai Zhen Wang

International Business Administration Program, Tunghai University International College

Abstract

This study delves into how uniform designs impact consumer behavior, revealing their role in shaping brand image, trust, and purchasing decisions across industries. Through qualitative and quantitative analysis, it shows how uniform design influences perceptions, attitudes, brand loyalty, and purchase intent, offering insights for businesses to enhance brand value and formulate uniform strategies.

Expository Session: Poster E-7

Soap Making: A Practical Exploration of Chemistry

Tereza Balounová

International Business Administration Program, Tunghai University International College

Abstract

This poster explores the science behind soap making, a process called saponification. A university practical chemistry class conducted this experiment, using common ingredients like oil and mixing it with sodium hydroxide (NaOH) to create soap. The main idea is to show how these ingredients can be turned into a cleaning product, step by step.

In the chemistry class experiment, students carefully mixed 21 grams of mixed oils with 8 milliliters of a 30% sodium hydroxide solution, following safety guidelines set by the professor. It took about 10 to 15 minutes of gentle mixing to trigger the saponification process, transforming the two ingredients into soap. After pouring the mixture into molds and letting it set in a cabinet, students were able to take their creations home.

While the experiment itself isn't complex from a sustainability point of view, it highlights the benefits of homemade soap. Compared to commercially produced soaps that travel long distances, this method reduces the environmental impact of transportation and large-scale manufacturing. Homemade soaps also allow greater control over ingredients. People can choose natural and eco-friendly oils to customize their own soap. This could lead to people using fewer store-bought soaps, which may contain unnecessary additives and chemicals.

This simple experiment serves as a foundation for sparking scientific curiosity. By seeing chemistry at work in real life, people can learn more about everyday products and why sustainability matters.

Expository Session: Poster E-8

Living in the Silicon Age: The Impact of Semiconductor Technologies

Gracia Intan Permatasari

International Business Administration Program, Tunghai University International College

Abstract

Learning chemistry can be fun when we try to learn the concept of chemistry through experimentation. This poster will discuss and describe the amazing topic of chemical gardens. Chemical gardens are formed when metal salts react with a sodium silicate solution, resulting in plant-like structures. This expository poster describes the items that are required, the step-by-step method, how to conduct the experiments, and the underlying scientific concepts. As a result, the audience will gain a better knowledge of how basic chemical reactions may build complex and visually appealing forms using the principles of osmosis, diffusion, and precipitation.

Expository Session: Poster E-9

Semiconductors Nanocrystal Properties Overview

Anne Cheng, Joy Anjora, Christy Caroline

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

Semiconductors are vital in modern electronics due to their unique ability to conduct electricity under certain conditions, with conductivity between that of insulators and conductors. Silicon and germanium are the most used materials because of their excellent electrical properties and abundance.

The process of doping, which involves adding impurities to a pure semiconductor, creates p-type and n-type semiconductors. P-type semiconductors are made by adding elements with fewer valence electrons, creating "holes" or positive charge carriers. N-type semiconductors are produced by adding elements with more valence electrons, resulting in excess negative charge carriers.

A p-n junction is formed when p-type and n-type semiconductors are joined, crucial for devices like solar cells. In solar cells, photons excite electrons, creating electron-hole pairs. The p-n junction's electric field separates these pairs, generating an electric current by directing electrons to the n-type side and holes to the p-type side.

Semiconductors are foundational to integrate circuits and microchips in electronic devices, from computers to medical equipment. In renewable energy, they are essential for photovoltaic cells in solar panels, converting solar energy into electricity.

Understanding semiconductors' properties, production, and applications is key to technological innovation and advancements in various industries, highlighting their importance in both everyday electronics and renewable energy solutions.

Expository Session: Poster E-10

The Sea Turtles and Us: Ensuring a Future for Taiwan's Marine Life

Vonny Cristina Tan and Tereza Balounová

International Business Administration Program, Tunghai University International College

Abstract

For the ICIC 2024 conference, we chose the topic of protecting sea turtles because many people want to help these amazing creatures but may not know how. This poster addresses sea turtle conservation in Taiwan, emphasizing our responsibility due to the presence of five of the world's seven sea turtle species in our waters. It will present key facts and data about sea turtles in Taiwan, especially around Xiaoliuqiu, Taiwan's only coral island, which has some of the highest densities of sea turtles globally.

Taiwan's sea turtles face threats from fishing equipment and climate change. Imagine these gentle turtles mistaking plastic bags for jellyfish or getting caught in fishing nets. It's heartbreaking, but we can help protect sea turtles by making simple changes in our daily lives. This poster will explore how human activities affect sea turtles, the impact of single-use plastics, and the importance of avoiding them. It will also highlight ongoing conservation efforts, including beach cleanups and support for sustainable fishing and eco-tourism.

Our goal is to raise awareness and inspire action. By focusing on sea turtle conservation and presenting Taiwan's unique position and efforts, we aim to inspire greater community involvement and support for sustainable practices.

Through this poster, we seek to foster a deeper connection between our community and sea turtles, encouraging collective responsibility and active participation in their preservation. Each of us can contribute to a thriving marine environment and happier sea turtles.

Expository Session: Poster E-11

Developed Strategies to Help a Company Achieve Corporate Sustainability

Shen Yuan Lee

International Business Administration Program, Tunghai University International College

Abstract

As climate events such as drought, flooding, and heat waves have become more severe, many governments and organizations have developed strategies to try to tackle the issues. In 2015, member states of the United Nations (UN) signed the Paris Agreement to restrict the global temperature rise to 1.5°C above pre-industrial levels so that all industries will have to develop practices and measures to help them achieve sustainable transformation. The Carbon Border Adjustment Mechanism (CBAM) in the European Union (EU) is applied to regulate carbon emissions of goods that are imported into EU regions. A similar carbon tax mechanism can be found in the Clean Competition Act of the United States.

Although Taiwan is not one of the member states of the United Nations (UN), Taiwan's industries, especially manufacturing, play a crucial role in the global supply chain. To maintain the competitiveness of the industries in Taiwan, the Taiwanese government enacted the Climate Change Response Act in February 2023 to keep pace with the world's carbon reduction targets. Beaufils et al. (2023) point out that the competitiveness of a company can be diminished by failing to reduce its carbon emissions, which can result in significant tax burdens for the company. Therefore, there is an urgent need for all industries in Taiwan to develop practices and measures to achieve sustainable operations, which is a business administration model that considers environmental, economic, and social sustainability in decision-making to ensure long-term viability.

Expository Session: Poster E-12

Internship Experience at Mt. Stonegate: Let's Build a Greener World, Together

William Daniel

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

This abstract encapsulates the author's enriching experience interning at Mt. Stonegate Green Asset Management, highlighting their roles and responsibilities during the semester. The poster offers insights into the intern's tasks and responsibilities, providing valuable advice for aspiring interns interested in pursuing similar opportunities. Through this abstract, readers gain a glimpse into the intern's journey of professional development and the valuable lessons learned during their time at Mt. Stonegate Green Asset Management.

Expository Session: Poster E-13

Beyond Combat: An Exploration into The Utility of Pacifism in Video Games

Alexandria Fermin and Alec Betancourt

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

In recent years, there has been a significant increase in research exploring video games as a platform for learning and development. Most notably in the field of philosophy and ethics where the medium has been shown to have significant benefits in the development of moral reasoning. Naturalistic studies of the topic employ commercially available entertainment games to gather insight into spontaneous moral reasoning and ethical behavior and has revealed noteworthy data about pacifism in video games. One such game is "Undertale" developed by Toby Fox.

Through this game, well known for its unique mechanics that lend themselves to examining themes of morality, the study aims to explore the utility of pacifism in video games. Peer reviewed research focused on ethical decision making concludes that genuine moral and emotional engagement, influenced by narrative impact, develops a greater sense of empathy and compassion between the players and the characters they encounter. This leads to reflection on the consequences and ethical implications of their choices, encouraging the development of moral reasoning. Pacifism in this game and others like it, can also serve as a form of symbolic resistance wherein traditional power fantasies, often present in video games are challenged- promoting critical thinking and alternative problem-solving methods. These insights into how pacifism in video games, narrative design and player choices promote ethical and moral engagement contributes to a deeper understanding of the philosophical, sociological and psychological impacts of intentionally non-violent gameplay.

Expository Session: Poster E-14

Per - and Polyfluoroalkyl Substances & Human Health: An Overview of Exposure Risks and Health Impacts of PFAS Toxicity

Alexandria Fermin

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

In recent years, reports of the human health impact of per- and polyfluoroalkyl substances (PFAS) have greatly increased. As a result, this review aims to assess and clarify the state of knowledge regarding the toxicological effects of this classification of chemicals. There is a wealth of information regarding sources and pathways to exposure, as well as the mechanisms of PFAS toxicity. Epidemiological evidence has linked exposure to specific PFAS with adverse health effects (i.e. cancer, endocrine disruption, metabolic issues and immunotoxicity). Experimental animal models exist for many of these effects, emphasizing dose-response relationships and their correlation with human data.

Data also indicates disproportionate rates of exposure for sensitive populations (pregnant women, infants and economically disadvantaged groups). This calls for particular attention in current risk assessment methods, health guidelines from regulatory bodies and public health policies to better mitigate the higher risk. Furthermore, because the effects of only a few example compounds have been noted, more complex and modern methods should be implemented to develop toxicity information on new and existing PFAS. An abundance of caution may also be required to safeguard human health.

Expository Session: Poster E-15

Essence of Liquid Ruby

Connie Yeh, Justin Chen, Catherine Lin

International Business Administration Program, Tunghai University International College

Charlie Miller and Lexa Bennett

Dietrich School of Arts and Sciences, University of Pittsburgh (USA)

Abstract

Ruby Black Tea (No. 18) is a well-known Taiwanese tea with a unique origin and flavor. Ruby Black Tea originated in 南投縣魚池鄉 in the Sun Moon Lake area. Its main features include its bright color, smooth taste, and special aroma combining fruity, cinnamon, and mint notes. The poster discusses why black tea is so popular today and explains some of its health benefits.

Expository Session: Poster E-16

Da Yu Ling Oolong

Yun Hsi Hsieh, Yu Luen Lee, Tsan Yang Tsai, Tzu Lin Chen

International Business Administration Program, Tunghai University International College

Abstract

Arning of Tea culture. Tea is a simple beverage, but do you know the formal way to enjoy tea art? This poster will tell you about what we have experienced in the mini semester!

Through the class process, we have learned different tea types, trying different flavor of tea, and we picked one of our favorites which is “文山包種茶” after we picked which tea to present, we experienced the field trip to know how tea has been made from the very beginning, also we tried to make some tea desert!

We'll show all what we experienced in this class from this poster, hope you got interested in it!

Expository Session: Poster E-17

When Does a Game Stop Being a Game?

Brian Wang and Qian Yu Chi

International Business Administration Program, Tunghai University International College

Abstract

As a significant and growing share of modern entertainment, video games seem to have a complex blend of positive and negative effects.

On the positive side, they provide a sense of achievement and satisfaction through goal-oriented gameplay. Studies have shown that this can significantly contribute to an individual's overall well-being as an effective tool for stress relief and mood improvement enhancing relaxation and reducing anxiety. In addition, video games are known for enhancing cognitive and problem-solving skills. Players often exhibit improved spatial reasoning, strategic thinking, and dexterity, which are valuable in both academic and professional contexts. For instance, research has demonstrated that surgeons who play video games tend to perform better in their tasks and foster creativity, particularly in younger players, by encouraging innovative thinking and problem-solving. Massively multiplayer online games (MMOs) create virtual communities where players can interact and form meaningful relationships. These virtual interactions can extend real-life friendships and build a sense of belonging, contributing to players' social well-being.

However, the positive effects of video games are counterbalanced by several negative aspects. Toxic behavior, including harassment and discrimination, is prevalent in many multiplayer games, leading to a negative gaming environment and player distress. Excessive gaming can result in addiction, negatively impacting daily responsibilities and real-life social interactions. Health issues such as eye strain, poor posture, and a sedentary lifestyle are common among avid gamers, potentially leading to serious long-term consequences. Extended gaming sessions have been linked to lower emotional creativity, particularly in men, and can contribute to social isolation.

The goal of the poster is to raise awareness of the detracting effects of video games and hopefully encourage people to think about them the same way they may see any other potential vice. This can hopefully encourage responsible personal behavior and common-sense policy decisions.

Expository Session: Poster E-18

The Synthesis and Application of MXene Electrocatalysts in Hydrogen Evolution Reaction: A Review

Georgia Fuh

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

Hydrogen evolution reaction (HER) electrocatalysis is crucial for the efficient and scalable production of renewable hydrogen fuel. As research advances in nano scale engineering, there is growing interest in the potential of MXene-based HER electrocatalysts. MXenes are a diverse class of two-dimensional nanomaterials with variations in elemental composition, surface chemistry, stoichiometry, and morphology, all of which significantly impact their electrocatalytic performance. Additionally, the synthesis methods of MXene-based materials vary widely, directly influencing their intrinsic properties and interactions with hybrid materials. Optimizing the synthesis of MXene electrocatalysts is essential for enhancing their electronic structure, energetics, and kinetics. This review examines the relevant literature to explore how different synthesis strategies affect the electrochemical properties of MXene-based HER electrocatalysts, promoting efficient, affordable, and environmentally friendly hydrogen production.

Expository Session: Poster E-19

The Scientific Landscape of Alishan Tea

Ann Lu, Jenny Yang and Yirong Li

International Business Administration Program, Tunghai University International College

Romeo Santino Norris

Department of Sociology, Davidson College (USA)

Star Jessica Sulkowski

International relations and International Studies, University of Pittsburgh (USA)

Abstract

Alishan High Mountain Oolong Tea is a tea unique to the Chiayi Country of Taiwan. It's grown exclusively in the largest mountain range of Taiwan, the Alishan, and is known for its golden emerald color and sweet-floral aroma and taste. Alishan distinguishes itself from other oolong teas in Taiwan due to the high elevations and humidity it is grown at. The environmental combination allows the nitrogen dense environment to increase the quality and amplify the flavors aroma of Alishan tea. The Alishan oolong tea is an amalgamation of the plant biology within Alishan range, the chemistry of the tea plants and leaves; the biochemistry furthers the elegance of oolong tea and the culture and history of Taiwan.

Expository Session: Poster E-20

A Taste of Four Season

Ann Lu, Jenny Yang and Yirong Li

International Business Administration Program, Tunghai University International College

Romeo Santino Norris

Department of Sociology, Davidson College (USA)

Star Jessica Sulkowski

International relations and International Studies, University of Pittsburgh (USA)

Abstract

This exposition aims to introduce Four Season Spring Tea (Sijichun tea) to a broader audience, including foreign students, highlighting its significance in our tea culture. Four Season Spring Tea is a unique variety grown in Taiwan, celebrated for its ability to produce high-quality leaves throughout the year, resembling the freshness of spring.

Our purpose is twofold: to familiarize people with the distinctive characteristics of Four-season Spring tea and to elucidate the differences between its green tea and oolong tea variants. Through this introduction, we hope to enhance appreciation and understanding of this exceptional tea among diverse audiences.

In conclusion, Four Season Spring Tea, with its year-round freshness and varied processing methods, offers a unique glimpse into Taiwan's tea culture. By introducing Four Season green tea and Four-Season oolong tea to a wider audience, we hope to foster a deeper appreciation and understanding of this cherished tradition.

Expository Session: Poster E-21

“Delicate Spring” introduction to LISHAN Oolong tea

Grace Fleming and Grace Lemelin

Khoury College of Computer Science, Northeastern University (USA)

Brian Lee, Lulu Chang, Veronica Chiao

International Business Administration Program, Tunghai University International College

Abstract

Lishan Oolong tea, originating from Taiwan, is renowned for its unique flavor and high quality. Grown at elevations between 1,600 and 2,600 meters on Lishan Mountain, this tea benefits from the region's cool, misty climate and rich, fertile soil. The high-altitude environment contributes to its slow growth, allowing the leaves to develop a distinct, complex character.

As interest in high-quality teas continues to grow, Lishan Oolong remains a standout, offering a quintessential taste of Taiwan's rich tea heritage. Whether enjoyed for its exquisite flavor or its healthful properties, Lishan Oolong represents the pinnacle of Taiwanese tea craftsmanship.

Expository Session: Poster E-22

From Leaf to Cup: Exploration of Green Tea in Taiwan

Niko Kinjo, Jennifer Wang and Sophia Ma

International Business Administration Program, Tunghai University International College

Cate Corry

Colorado School of Mines

Flor Martinez

Sonoma State University

Abstract

This poster provides an overview of green tea, including its historical origins, production processes, and key sensory characteristics. Drawing on a visit to the Tongluo Tea Factory, the study highlights the stages of tea cultivation and processing, as well as the techniques that influence flavor and quality. In addition, it examines the importance of brewing methods and temperature control in shaping the overall tea-drinking experience.

Expository Session: Poster E-23

Translating Song Jingyi's Prose Piece 雅量 (Benevolence)

Corrine Fu, Angel Cheng, Yuqi Zhu Kitty and Jessica Yu

International Business Administration Program, Tunghai University International College

Abstract

Our project involves translating Song Jingyi's prose piece "雅量 (Magnanimity)." This translation process presents several unique challenges. For example, Song Jingyi's writing style is both elegant and subtle, filled with traditional Chinese cultural nuances and imagery, making it challenging to find precise and suitable English expressions that capture the original tone and depth. In our translation process, we adopted several key principles and techniques. Firstly, we aimed to remain faithful to the original content and style while ensuring that the translation reads smoothly and naturally in English. We paid careful attention to the nuanced meanings of each sentence, using a combination of literal and free translation methods to preserve the original cultural imagery while making the translation accessible and comprehensible. This translation is more than a linguistic exercise; it is a cultural transmission. Through our work, we aim to help English-speaking readers appreciate the beauty of Chinese culture and the profound insights in Song Jingyi's work.

Expository Session: Poster E-24

Translation of "認識日本百年傳統習俗哭相撲"

Sarano Takeyama

International Business Administration Program, Tunghai University International College

Juliana Landefeld

Colorado School of Mines

Raymond Watters

University of Pittsburgh

Abstract

This poster explores the traditional Japanese custom of Naki Sumo, a centuries-old crying baby contest rooted in cultural beliefs about health and spiritual protection. It examines the historical origins, symbolic meanings, and ritual practices associated with the event, including its connection to Shinto beliefs and child development. In addition, the project analyzes the translation process used to present this culturally specific tradition to an international audience, highlighting key linguistic and interpretive challenges.

Expository Session: Poster E-25

風水字源: Terminology of Feng Shui

Stephan Phillip, Jason Anderson and Nicole Horax

International Business Administration Program, Tunghai University International College

Abstract

This poster explores the development and meaning of Feng Shui terminology, focusing on how key terms have evolved through Chinese history and cultural practice. It introduces important concepts related to geography, spirituality, and environmental balance, while explaining their roles in traditional Feng Shui. In addition, the project discusses the challenges of translating these terms into English and the methods used to ensure clarity and cultural accuracy.

Expository Session: Poster E-26

Magnitude 5.8 Earthquake in Hualien!

Emily Yang, Mark Cai, Tina Chen and Zarka Yuan

International Business Administration Program, Tunghai University International College

Abstract

This poster examines a magnitude 5.8 earthquake in Hualien, Taiwan, highlighting its immediate impacts, including landslides, infrastructure inspections, and public response. It presents a translated news report alongside an analysis of linguistic and stylistic challenges encountered in conveying disaster-related information across languages. The study emphasizes the importance of clarity, accuracy, and audience adaptation in translating time-sensitive news for an international readership.

Expository Session: Poster E-27

Taiwan's Challenge in Achieving the 2050 Net Zero Society

Jalal Algayda, Paween Hongpraprom, Siyabomga

National Taichung University of Education

Abstract

This poster examines Taiwan's challenges in achieving its 2050 net-zero emissions goal by analyzing its current energy structure, policy initiatives, and transition constraints. It highlights key issues such as heavy reliance on imported energy, the nuclear phase-out, and the need for expanded renewable energy capacity under the "20-30-50" policy framework. The study also proposes policy solutions, including carbon pricing, increased investment in green technologies, and enhanced international collaboration, to support a sustainable and resilient energy transition.

Expository Session: Poster E-28

Hanoi Free Tour Guides (HFTGs)

Tania Listya, Sandy Lam, Phan Huynh Thi Bich Duyen

National Taichung University of Education

Abstract

This abstract presents the impact of Hanoi Free Tour Guides in empowering travelers to delve deeper into the local culture, history, and daily life of Hanoi. Through a combination of guided tours, storytelling, and interactive experiences, visitors can gain a genuine understanding of Hanoi's heritage and contemporary life. The purpose of "Hanoi Free Tour Guides" is to provide free guided tour services to tourists while promoting the sustainable development of local communities. They firmly believe that through travel, people can better understand and respect different cultures and traditions. HFTGs' goal is to allow every visitor to feel the warm hospitality of the people of Hanoi, while promoting the development of the local economy and the inheritance of culture.

Expository Session: Poster E-29

Renewable Energies

Vong Hung Luan, Quach Uyen Thy, Bui Pham Ngoc Ha
National Taichung University of Education

Abstract

This poster aims to emphasize the urgent need for reducing carbon emissions of dirty fuels (coal included, gas, and even biofuels) within traditional manufacturing industries. It vividly paints the grim picture of environmental pollution that carbon emissions perpetrate and advocates for adoption of clean energy sources as a silver bullet solution. The poster does not just stop at waving a problem statement; it offers tangible recommendations and possible solutions on how to eliminate carbon emissions whilst it guides the production sector towards sustainable practices. Bangladesh, the second-largest textile exporter, is used as an example to illustrate the severity and urgency of the issue caused using dirty fuels. Following this poster, we hope to call for more attention to the energy usage within traditional manufacturing industries. These industries significantly contribute to the economic development of developing countries and have a considerable impact on carbon emissions in these regions.

Keywords: renewable energy; dirty energies; manufacturing industries

Expository Session: Poster E-30

Aquaculture Production Sector in Taiwan -- An Overview

Kate Zhang

Sustainability Science and Engineering Program, Tunghai University International College

Abstract

In recent years, reports of the human health impact of per- and polyfluoroalkyl substances (PFAS) have greatly increased. As a result, this review aims to assess and clarify the state of knowledge regarding the toxicological effects of this classification of chemicals. There is a wealth of information regarding sources and pathways to exposure, as well as the mechanisms of PFAS toxicity. Epidemiological evidence has linked exposure to specific PFAS with adverse health effects (i.e. cancer, endocrine disruption, metabolic issues and immunotoxicity). Experimental animal models exist for many of these effects, emphasizing dose-response relationships and their correlation with human data.

Data also indicates disproportionate rates of exposure for sensitive populations (pregnant women, infants and economically disadvantaged groups). This calls for particular attention in current risk assessment methods, health guidelines from regulatory bodies and public health policies to better mitigate the higher risk. Furthermore, because the effects of only a few example compounds have been noted, more complex and modern methods should be implemented to develop toxicity information on new and existing PFAS. An abundance of caution may also be required to safeguard human health.

Research Session: Poster R-20

The Study of Verbal Form of Sexual Harassment

Jimmy Jian, Peter Li, Ryan Zhang, Billy Nian

Taoyuan Municipal Shou Shan Senior High School

Abstract

Taiwan has been the first Asian country to legalize same-sex marriage. Any kind of gender harassment or gender discrimination breaches the goal of zero tolerance of gender inequity. With the advent of MeToo social movement event in Taiwan, physical forms of sexual harassment have been overestimated. However, verbal form of sexual harassment has been underestimated. The objective is to conduct a survey on the issue of verbal sexual harassment (also known as linguistic sexism) to fill the previous research gap. The significance of the present study lies in the fact that a comprehensive understanding of sexual harassment can be reached through verbal sexism. 30 subjects participated in this study. The research instrument is a self-designed questionnaire, including quantitative and qualitative data. The major findings are: (1) 90 percent of the subjects have experienced being verbally harassed. (2) Lexical form of linguistic sexism is more than grammatical form counterpart. (3) Females are more susceptible to verbal sexual harassment than males. (4) Verbal linguistic sexism leads to negative feelings such as anxiety, disappointment, and frustration.

Research Session: Poster R-21

ChatGPT Human Job Displacement Survey in Taiwan: A Comparative Perspective between Insiders and Outsiders

Lulu Yang, Charlie Liao, Eva Zhao, Sharon Jian

Taoyuan Municipal Shou Shan Senior High School

Abstract

With the advent of ChatGPT, the issue of whether human job displacement by artificial intelligence (AI) will happen remains inconclusive in the existing literature. The objective of the present study aims at fixing the previous research gap by investigating the issue through a comparative perspective. 60 subjects participated in the study. They are grouped into two groups. 30 engineers form insider groups; 15 students and 15 teachers form outsider group. The instrument is a self-designed questionnaire which contains quantitative and qualitative questions. Descriptive statistics are adopted for data analysis. The major findings are: (1) two groups reach an agreement on the human job displacement by AI. (2) two groups hold a different attitude toward the negative impact of ChatGPT. Engineers care about more on psychological impact; teachers and students worry about economic impact. (3) As for job type to be replaced, administrative assistant and tax reporter are the top two choices. (4) Both of the groups agree that if job ability is more repetitive, the more likely for the job to be replaced.

Research Session: Poster R-22

Survey on the Human Euthanasia Legalization in Taiwan

Tina Tian, Lisa Qiu, Betty Zhang, Erica Chen

Taoyuan Municipal Shou Shan Senior High School

Abstract

The objective of this study is to conduct a genuine and empirical survey over the issue whether human euthanasia (mercy killing) should be legalized in Taiwan due to the recent Fu-Dan Ren event. In the existing literature, the research focus is on the animal mercy killing. The significance of the study is to fill the research gap for the understanding of human mercy killing. 30 subjects from Taoyuan city participated in this study. The instrument is a self-designed questionnaire which contains quantitative and qualitative data. The major findings are: (1) nearly 43 percent of the subjects agree the human euthanasia legalization, (2) roughly 72 percent of the subjects think the physical condition is the most appropriate condition for human enthusiasm to be implemented, and (3) approximately 90 percent of the subjects agree that their incurable family members should receive human mercy killing to release the painful feeling. The conclusion of this study is that subjects hold a positive attitude toward debatable human euthanasia.

Research Session: Poster R-23

A Survey on Taiwanese's Willingness to Buy on Japan Nuclear Food

Tina Li, Sylvia Qiu, Sandy Chen

Taoyuan Municipal Shou Shan Senior High School

Abstract

In the aftermath of the 2011 Fukushima nuclear disaster, the food from the Nuclear Disaster issue received a heated debate over whether Taiwan should accept the food source from Japan. Two political parties (Kuomintang (KMT) and Democratic Progress Party (DPP) hold a dichotomized attitude toward the issue. The former strongly disagree with the issue and the latter wants to unleash the border. Since the consensus over the issue is dichotomized due to political factors, this present study aims at conducting an empirical survey on general opinions about consumers' willingness to buy (WTB) without any loaded political stances. To fill the previous research gap, the significance of this study is to yield a comprehensive understanding of the general public's thoughts by adopting incidental factors rather than political or socioeconomic factors. 30 subjects participated in this study. A self-designed questionnaire is adopted. The major findings are: (1) Food source plays a crucial role in consumers' purchasing willingness to the seafood. (2) The subsequent effects of Fukushima earthquake are subjects show deep concerns about the food quality and they doubt the standard of the Japanese government.

Research Session: Poster R-24

A Comparative Study of the MeToo Social Movement Impact on the Campus Interpersonal Distance

Felix Huang, Jenny Zheng, Aubery Weng, Wade Dong

Taoyuan Municipal Shou Shan Senior High School

Abstract

In the aftermath of MeToo social movement event in Taiwan, the interpersonal distance caused by MeToo is unclear. The objective of present study is to examine the MeToo impact on interpersonal distance and fill the previous research gap in the existing literature since Taiwanese nationality and gender factor are not included in the previous research. 35 subjects from Taoyuan Senior High School participated in this study. They are grouped into teachers' and students' groups. The instrument is a self-designed questionnaire containing quantitative and qualitative data. The significance of this study is the gender factor is included, and the subjects are all Taiwanese and provides a comparative research value. The primary finding is that by within group difference, gender is a significant factor on the interpersonal distance for students, insignificant for teachers. The secondary finding is that by between group difference, teachers seem to be unaffected than students. The implication is that students are more cautious than teachers to keep a proper physical distance in social interaction.

Research Session: Poster R-25

A Survey on the Pedestrian Hell in Taiwan

Irene Li, Vivian Ma, Alma Zhang, Yumi Zhang

Taoyuan Municipal Shou Shan Senior High School

Abstract

Compared to the other countries, Taiwan is reported to be notorious in terms of pedestrian hell. The objective of this study aims to probe the possible factors triggering the unsafe traffic problems. The significance of this study is to investigate public opinions from an empirical study research design. 30 subjects participated in this study. The self-designed questionnaire including quantitative and qualitative research value is adopted to conduct their first-hand life experiences. The major findings are the two distinct factors triggering the pedestrian hell in Taiwan are both ethical and legal concerns. The ethical concern is that subjects think that most of the Taiwanese citizens lack of the awareness of public social politeness- pedestrian first. The legal factor is that Taiwan in the past used to allow pedestrian hell to happen since no tightened regulations enacted to fine those who didn't respect pedestrian has the priority. The most effective to prevent the notorious phenomenon from happening is the implementation of the new traffic law. The negative impact of pedestrian hell is pedestrian didn't feel safe when walking on the Zebra crossing area.

Research Session: Poster R-26

A Comparative Study of Traditional Learning Versus Online Learning on the Effect of English Vocabulary

Karen Lu, Sophia He, Mandy Wu

Taoyuan Municipal Shou Shan Senior High School

Abstract

The outbreak of the COVID-19 caused school systems to be closed, which leads to the emerging new learning mode- online learning or distance learning. The transition from traditional to online learning mode has a tremendous impact on students. The objective of the study is to compare the learning effect of English vocabulary between the traditional and online learning. The significance of the study lies in the comparative nature of the two different teaching approaches from an empirical questionnaire. 30 subjects participate in this study and a self-designed questionnaire serves as the major research instrument. The major findings that students have a contradictory when it comes to the learning style or preference. They seemingly like online learning. However, they admit that the learning attention span and the learning efficacy in the traditional learning is much preferred. From the comparative perspectives, traditional learning outperforms the online one in terms of learning effect.

Expository Session: Poster E-31

The Zero-killing Policy for Stray Animals is Inadvertently Harming Native Species and Disrupting Ecosystems.

Yuri Lin, Chloe He, Irene Huang, Winnie Cai
Taichung Municipal Shi-Yuan Senior High School

Abstract

Do you believe that before 2017, dogs suffered in silence, only to face slaughter within 12 days in animal shelters? However, instead of a shift in people's attitudes towards abandonment, what ensued was the enactment of "zero killing" policies without accompanying measures. Today, numerous news reports highlight the increasing problems stemming from stray animals, which are having a significant impact on the ecosystem. In 2022, Taiwan's species list officially classified dogs and cats as invasive alien species, like the Iguana and *Thespianism aethiopica*.

Stray dogs not only cause harm to wildlife, but also compete for resources. For example, Shoushan lacks water, and the nearby Taiya reservoir is one of the few water sources attracting many stray dogs. Even feeders go there to fetch water for cats and dogs to drink, inadvertently competing for water sources with Formosan serows and other wildlife. All signs indicate that since the implementation of the zero-euthanasia policy in 2017, stray dogs have exerted significant pressure on wildlife and the ecological environment.

The current situation is that stray dogs caught and taken to shelters are cared for until old age, but those that remain outside continue to reproduce, leading to an increasing number of strays. The main cause is irresponsible pet ownership, such as abandonment or letting pets roam freely. Therefore, changing people's attitudes is essential.

After reviewing this information, it's clear that since the implementation of zero euthanasia, shelters have become overcrowded, causing harm to both stray animals and wildlife due to increased roaming pets. With advancements in technology and changing values, animals no longer need to be euthanized inhumanely. Instead, humane methods involving medication can be used. Thus, implementing euthanasia alongside TNVR (Trap-Neuter-Vaccinate-Return) and stricter ownership regulations can reduce the stray population, benefitting animal welfare and alleviating pressure on wildlife, ultimately preventing conflicts among Taiwan's animals.

Expository Session: Poster E-32

Fun Facts About Oarfish

Ashley Huang, Amber Chen, Selene Zhang

Taichung Municipal Shi-Yuan Senior High School

Abstract

Do you want to have the power of prophecy? Oarfish can see into the future as to when earthquakes will happen ...

The oarfish has a flat body, silvery white body color, bright red fins, and no scales. This strikingly large, odd-looking fish is known for its distinctively long, ribbon-shaped body that enables the species to float inconspicuously throughout the water column. Oarfish can grow to more than 30 feet, which makes them quite the sight to behold. These animals aren't unique just because of their size. They are large filter feeders that primarily eat krill, plankton and other small crustaceans.

They are also deep-sea dwellers, thriving most often in the zone least explored by scientists to date: the mesopelagic zone (waters down to 1,000 meters). This fish is extremely rare, and it often appears before and after earthquakes, it is generally believed that it is because of the disturbance of the strata caused by the earthquake, so when it is disturbed it swims to the shallow sea surface to be discovered by humans, so the oarfish is considered to be a precursor to earthquakes, and it is commonly known as "earthquake fish" or "doomsday fish."

Although the peculiar phenomenon of this fish has not been confirmed by experts, we believe that this phenomenon can be used as a warning for earthquakes, because there are still many countries where earthquakes have occurred and this fish appeared before the quake, so we believe that there is a certain degree of accuracy.

Expository Session: Poster E-33

Should Taiwanese Students Have Mental Health Leave?

Chiang Yun En, Chen Szu Yun, Chen Qiao Yan, Lin Shin Ying

Taichung Municipal Shi-Yuan Senior High School

Abstract

Recently, Taiwan's psychological leave system has been officially launched, but the voices of agreement and disagreement are getting louder and louder. Have you ever thought about the background, pros and cons of the implementation of psychological leave?

The Ministry of Health and Welfare (2020) pointed out: On average, 1 in 11 people has seen a psychosomatic or psychiatric department, and as many as 3.81 million people take medication for insomnia caused by various physical and mental diseases.

Some think Taiwanese students face intense pressure to excel academically, leading to stress and burnout. What's more? Expectations to succeed academically can create pressure from family members, contributing to stress. In the long run, there's often a stigma around seeking help for mental health issues, which can discourage students from seeking support. Mental health leave offers students the opportunity to prioritize their well-being, access support services, and engage in self-care activities.

On the other hand, people have different opinions. Mental health leave might disrupt students' academic progress and lead to concerns about falling behind. Worse still, in Taiwanese culture, taking mental health leave could be seen as a weakness, potentially impacting future career prospects. Basically, implementing mental health leave policies requires resources that could be used for other mental health initiatives within schools. Under these circumstances, some people may not support the idea of giving students mental leave.

In conclusion, mental health leave gives students time to release their stress, preventing them from burnout. But at the same time, making sure students get proper treatment and resources from school are important. The government should ensure that students can have access to the support provided in school, including mental and behavioral health support as well as academic support.

Expository Session: Poster E-34

Why Are Taiwanese People Afraid of Radiation in Food?

Chuck Wang, Terry Wu, Kenny Chen, Tung Wang

Taichung Municipal Shi-Yuan Senior High School

Abstract

Did you know that the amount of nuclear radiation in food from Fukushima, Japan, is within the acceptable range for the human body?

Even though radioactive atoms are within acceptable standards for the human body, people are still afraid of food from Fukushima.

When a food contains doses above the recommended limits, it does not mean that the food is unsafe because many safety margins are built into the conversion estimate. Moreover, when importing Fukushima food, officials will be more careful to check the residual amount of radiation. As a result, we thought that the food from Fukushima would be safety, and if you are more cautious you can also consume it in smaller amounts.

Expository Session: Poster E-35

Sea Nomad in Sabah

Lai Yi Sin

Taichung Municipal Shi-Yuan Senior High School

Abstract

In Sabah, Malaysia, there is an ethnicity without nationality or identity. Betrothed are very large in number.

Because they don't have status, they cannot get medical care or education, and can only do odd jobs while hiding from the government. Do the most tiring work for the least money.

Because they have no status, the Bayao people can only live in remote coastal areas and on the sea, in the places which are full of garbage and waste. The locals call them "garbage bugs."

What can we do?

Supplies: In the villages of the Bayao people, supplies are very scarce, and they can only rely on floating garbage or collecting materials to make their own daily necessities. We can raise funds to purchase supplies and donate supplies to them to alleviate their urgent need.

Expository Session: Poster E-36

The Reasons Behind Nazi Violence

Annie Chen, Anna Hu, Ellie Liu

Taichung Municipal Shi-Yuan Senior High School

Abstract

We often encounter terms like World War II, the Nazi regime, and the Holocaust in history classes, yet this history often feels distant, understood only through events and phrases. Do you know what Nazism is? And why did the Jewish Holocaust happen?

The rise of Nazism is intricately linked to its leader Hitler. After winning the election, Hitler began to eliminate his opponent's step by step, and finally gained dictatorial power. He established concentration camps to imprison his enemies and communists, and carried out the cleansing of the Jewish race, causing countless hatreds and the loss of innocent lives. Thus, the question arises: why were Jews targeted by Nazi hatred?

One possible explanation is rooted in the aftermath of World War I, during which the German people's livelihood was extremely difficult, and complaints became more and more intense.

Therefore, to divert attention and consolidate power, those in power began to propagate that Jews were solely responsible for Germany's plight, which turned into future racial destruction and the Jewish Holocaust.

Various actions committed by the Nazis against the Jews caused great harm to their physical, mental and human rights at the time, and were subjected to relatively unfair treatment. Therefore, we feel that the government should make amends to the Jews and try its best to prevent this kind of injustice from happening again in modern society, so as not to ignore people's human rights

Expository Session: Poster E-37

Viewers Should Have More Media Literacy Skills

Debra Xu, Iris Su, Doris Chen, Zoey Wang

Taichung Municipal Shi-Yuan Senior High School

Abstract

We contend that every viewer must equip themselves with media literacy skills, especially because the Internet is a space allowing users to express their viewpoints freely, and freedom of speech is guaranteed. Research from *Teson Journal* and *Emerald Insight* suggests that media literacy skills are essential for students, media workers, and educators to navigate, analyze, and engage with digital culture effectively and ethically.

Expository Session: Poster E-38

The Protection of Leopard Cat

Sophi Chen, Ginny Huang, Jeremy Wang, and Daniel Chen

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Abstract

Did you know why leopard cats are endangered? The Taiwan government has continued to destroy mountains and forests to have more land for houses and farms, and even recreational areas, but they ignore the native animals that live in the mountains and forests.

Leopard cats are roughly the size of house cats with tawny, black-spotted pelts and thrive in Taiwan's lower elevations of around 500 meters. Areas that mix wilderness with agriculture are particularly hospitable for them as rice fields provide ideal habitats for leopard cats' favorite prey, field mice and other rodents.

Yet despite the beauty and bounty of the Miaoli countryside, the green canopy hides a more ominous reality. Researchers with the Taiwan Endemic Species Research Institute (TESRI) under the Council of Agriculture estimate Taiwan's leopard cat numbers at less than 500 animals divided into three isolated populations in Miaoli, Nantou, and Taichung counties.

In 2008, Taiwanese native leopard cats were listed as "extinct protected animal" by Taiwanese officials. The number of leopard cats in Taiwan is declining faster than in other countries, indicating the crisis of animal conservation and environmental protection in Taiwan.

Due to the tragedy that has already occurred, we have found out four main reasons that caused this situation. First, large-scale development of natural habitats and construction of roads. Second, the use of chemical agents directly or indirectly caused the death of leopard cats. Third, the roads overlapped with leopard cats' habitats. Last, hunters use hunting dogs and traps to hunt leopard cats.

Oral Presentation 1A-1

Toward the Excellence in Entrepreneurship Education and Ecosystem: The Model of Virginia Tech

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Abstract

This paper not only reviews the key factors of entrepreneurship education and ecosystem but also provides a practical framework for the model of Virginia Tech. The study commences by defining the key terms, entrepreneurship curriculum, entrepreneurial activities and practices, organizational support and resources, and leadership vision. It then delves into an analysis of a conceptual framework, exploring the role of each factor in facilitating the outstanding model in entrepreneurship education and ecosystem for Virginia Tech. The study's findings reveal that the institution has successfully integrated key factors towards an excellent entrepreneurship education ecosystem. These factors include fostering a thriving entrepreneurial environment, extending its innovation commitment, and making a broader impact on its educational initiatives, all of which have practical implications for other institutions.

Oral Presentation 1A-2

ChatGPT on the Rise: A Bibliometric Analysis of a Disruptive Technology

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Abstract

The rapid growth of ChatGPT, a leading generative artificial intelligence language model has sparked great interest and inspired many researchers to explore this new frontier. Within a short span of time since late 2022, many research articles related to ChatGPT has been written and published. By using bibliometric analysis approach, this study aims to study the latest research trends in ChatGPT. 8404 publications related to ChatGPT, published between December 2022 and May 2024, were systematically extracted from SCOPUS database. This was followed by re-categorization and re-coding processes to obtain meaningful inference and trends. Keyword research themes, emerging trends, researchers' collaborations and publication volumes were examined. The outcomes of the study will provide an understanding of the current research trends on ChatGPT and how it will shape the academic research in the future.

Oral Presentation 1A-3

The Impact of Pandemic Conditions on Burden among Family Caregivers: An Empirical Framework

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Abstract

In response to COVID-19 contagion, governments enacted mobility restrictions, social distancing, and lockdown requirements. In numerous households, these containment measures disrupted established routines of care for people with chronic conditions (PCCs), forcing informal carers to adapt to a less accommodating caregiving environment. The adaptation process made caregiving more resource-intensive and increased the burden, loneliness, and social isolation experienced by some carers. Pearlin et al.'s (1990) theories of caregiving stress suggest that during the pandemic, carers experienced additional distress when the adaptation process consumed too many of their personal resources. This additional distress is referred to as "the cost of containment." The author proposes to estimate the cost of containment by modeling the relationship between locally enforced COVID-19 policies and carer psychological health outcomes.

Carer emotional distress is a major risk factor in the breakdown of home care arrangements. Negative affect among carers resulted from pandemic-related barriers to performing their caregiving duties. Although numerous studies show that pandemic containment measures affected school children, patients, and the general public, relatively few concern carers.

The proposed study conceptualizes the adaptation process as an emotionally costly outcome of a pandemic containment "treatment" that increased the resources carers had to expend on their caregiving duties. The treatment model will be developed in three steps: (1) Identify the co-occurring pathways through which the containment measures affected carers; (2) From these, derive a set of mutually exclusive treatment categories and use them to partition the sample into treatment groups; and (3) Estimate an endogenous multinomial treatment model relating the categories to measures of change in carer emotional health (burden, loneliness, and social isolation).

Oral Presentation 1B-1

Qi, Yin-yang, and Discourses on Androgyny, Sexed Bodies, and Anomalies in Traditional Chinese Medicine

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Abstract

This paper examines medical constructs of the human body in pre-modern China, from androgyny and sexed bodies to anomalies, as envisioned in The Yellow Emperor's Inner Canon 黃帝內經 (Huangdi neijing, ca. 1st century), Li Shizhen's 李時珍 Materia Medica 本草綱目 (Ben cao gang mu, 16th century), women's medicine 婦科 (fuke), and sexual manuals 房中術 (bedchamber arts). While a real, material body exists, the meanings attached to the body should not be treated as arising naturally. Conceptualizations of the human body in the traditional Chinese qi and yin-yang framework demonstrate that, like gender, bodily sex is contextualized and produced within discourses. Although different traditional Chinese medical texts envision the body and male-female attributions differently in relation to bodily materiality, sexuality, and reproduction, they nevertheless conform to and further Confucian gender and sexual orders. Moreover, implicit in qi and yin-yang medical thinking is a racial hierarchy that places Chinese people in a superior ranking to non-Chinese people, whose bodies are associated with animalism and deformity. Bodies matter, and qi and yin-yang medical theory fundamentally suggests a biopolitics that not only reinforces patriarchal hierarchies but also strengthens a Chinese cultural identity by conflating "foreignness" with physical abnormality.

Oral Presentation 1B-2

“HEAL” Film Screening: The Importance of Education and Humanization in Conflict

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Abstract

We will watch HEAL, a powerful supernatural short film about children living through war and conflict and have a Q&A discussion about what it brings to light within the context of today. As most continue to show indifference to the enormous loss of human life in conflicts around the world, HEAL’s story and message resonates strongly and was part of a Special Showcase at the Comic-Con Museum on June 8th. The film has also won numerous accolades and awards over the years including receiving the Frank Capra Award, the Jesse Epstein Humanitarian Award and winning Best Science Fiction Film at Comic-Con - the largest comic and pop culture festival in the world.

Oral Presentation 2A-1

Passing Calculus: How Good is “Good Enough?”

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Abstract

At Taiwan’s international colleges, students with varying backgrounds take Calculus, with English as the medium of instruction. The Calculus classroom is more academically diverse than at traditional programs, with larger spreads in English skills and subject preparation. Calculus instructors must accommodate differences between individual students’ exam performance and learning rate. At the same time, they must hold all students to expected assessment standards.

Calculus exams typically exhibit an “M-shaped” distribution, with extreme disparity in grade performance. While flexible testing strategies (e.g., retesting) may benefit most students, those with weaker backgrounds may still struggle to pass the course. The teacher must therefore establish a minimum testing standard that defines the border between passing and failing.

The author presents the two components of her approach to testing in Calculus. The first is a quiz framework, based on the division of course content into units that the learners study individually, at their own pace. A student completes a unit by passing the associated quiz, and can retake failed quizzes as needed, without any point penalty. This allows students to achieve a desired quiz grade through two channels: quickness (thorough preparation before the first quiz attempt) or persistence (repeated attempts).

The second component of the Calculus testing approach is threshold passing standard. This is represented by the “walk-through” quiz option, in which the student does the problems with the help of example solutions. This option fits well into the Calculus course, which uses a “template” for creating new quiz versions for retesting.

Oral Presentation 2A-2

Counting the Costs of Academic Censorship

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Abstract

What are the costs of restricting academic freedom? In this paper, I leverage data on academic freedom and incident reports to measure the effects of academic censorship on scholarly contribution around the world. Combining this data with statistics on scholarly citations, as well as spending for research and development, I calculate the marginal cost of censorship as a function of return on investment. Findings suggest the costs of censorship are greatest in countries where censorship coincides and conflicts with high rates of intellectual investment in research and development. This pattern is emblematic in emerging economies, such as those in Asia and the Middle East.

Oral Presentation 2B-1

Human Capital Dynamics and Sustainable Growth in Japanese Professional Service Firms: The Paradox of Experience Diversity

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Shohei Funatsu, Assistant Professor

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Abstract

This study delves into the intricate relationship between human capital dynamics and sustainable growth in Japanese professional service firms (PSFs), specifically within the knowledge-intensive patent sector. Analyzing longitudinal data from 62 large Japanese patent firms between 2001 and 2009, the research explores the impact of professional experience, hiring practices, and experience diversity on firm growth trajectories. The findings challenge the conventional wisdom that simply increasing headcount guarantees PSF growth. Instead, the study underscores the critical role of strategic human resource management in navigating the complex interplay between experience heterogeneity and sustainable expansion. By fostering knowledge sharing and collaboration to effectively manage experience diversity, PSFs can unlock their full growth potential and navigate the challenges of scaling up in a competitive market. The study provides valuable insights for PSFs seeking to optimize their human capital strategies for sustainable growth, highlighting the need for a nuanced approach that prioritizes the strategic management of experience diversity over simply increasing staff numbers.

(*) Presenting author

Oral Presentation 2B-2

Does local government's Renewable Energy Policy promote corporate Green Technology Innovation? Empirical analysis of Patent Data

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Abstract

Energy is central to the climate challenge and crucial to its resolution. The burning of fossil fuels like coal, oil, and gas being the primary driver of global warming. This underscores the urgency of transitioning to clean, renewable energy sources like solar, wind, and hydropower. Embracing these green innovations is crucial for combating climate change effectively. Green innovation is pivotal for organizations and communities aiming for sustainability, and patents play a crucial role by providing inventors with intellectual property rights. Encouraging green innovation through patents not only brings financial benefits but also contributes to reducing regional CO2 emissions. Despite global commitments to net-zero emissions by cities like New York and Tokyo, the effectiveness of renewable energy policies at the city level is unclear. This study fills this gap by examining the impact of such policies on green technology patents in 17 Taiwanese cities from 2012 to 2021, utilizing a two-way fixed effects econometrics model for comprehensive analysis. The empirical results reveal key insights into the positive impact of renewable energy policies on the innovation of green technology in Taiwan. It emphasizes that regions experiencing a growth in the duration of one-year Policy History witness an approximately 2-unit increase in green technology innovation. Furthermore, control factors like Population Density demonstrate a positive and significant influence, whereas Energy Consumption frequently shows a negative correlation. It also suggests that the study differentiates between research institutions and the corporate sector, finding the local government's policy has a significant impact on corporation innovation performance compared to research institutions. These findings emphasize the importance of renewable energy policies, population characteristics, and financial investments in driving green technology innovation in Taiwan. It provides valuable insights for policymakers and researchers aiming to understand the dynamics of green technology innovation in the context of renewable energy policies.

(*) Presenting author

Oral Presentation 2B-3

Sustainable Iridium Oxide ($\text{IrO}_x \cdot n\text{H}_2\text{O}$) Catalyst for Oxygen Evolution Reaction

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Abstract

This presentation addresses the crucial issue of catalyst sustainability, with a particular focus on amorphous iridium oxide (IrO_x), a leading catalyst for the oxygen evolution reaction (OER). Our goal is to highlight the importance of balancing catalytic performance with durability to make practical applications. Firstly we will introduce a new approach employing dual-potential pulsed amperometric technique in intermittent electro-flocculation for both water oxidation and oxygen reduction reactions. This method results in a distinctive physical morphology and chemical composition of $\text{IrO}_x \cdot n\text{H}_2\text{O}$, leading to modified kinetic mechanisms and enhanced stability. At second, we explore the integration of the biological molecule chloroporphyrin IX iron (III) (Hemin) as an auxiliary catalyst. Hemin is used to consume the oxygen produced during electro-flocculation, acting as a base layer to prevent the accumulation of harmful oxygen. Electropolymerized hemin enhances the stability and durability of the IrO_x catalyst by mitigating detrimental oxygen buildup, which can degrade catalyst performance over time. Third, an innovative real-time catalyst regeneration method is also presented. This technique involves adjusting the pH to switch between hexahydroxyiridate (IV) ($[\text{Ir}(\text{OH})_6]^{2-}$) and IrO_x , effectively extending the lifetime of IrO_x electrodes. This regeneration process can occur concurrently with the OER, providing a continuous means of maintaining catalyst activity and efficiency. This novel approach not only prolongs the catalyst's operational lifespan but also ensures consistent performance during prolonged use. These advancements are particularly significant for sustainable energy systems, where efficient and long-term operation of catalysts is crucial for processes such as water splitting and fuel production.