

ANBC 2022

Aguman Ning Belwan Conferences

The 2nd National Research Conference Organized by the Tarlac State University

BOOK OF ABSTRACTS

DEC | SUBIC GRAND HARBOUR
1-2 | HOTEL, SBFZ, ZAMBALES
2022 | or via
ZOOM TELECONFERENCING





This book comprises all of the abstracts of the research papers presented during the 2nd National Research Conference, held on December 1-2, 2022, at the Subic Grand Harbour Hotel in Subic Bay Freeport Zone, Zambales, Philippines.

CONFERENCE OBJECTIVES

The conference aims to be a platform for researchers to showcase potential in providing solutions that help for the betterment of our nation. Specifically, the conference aims to:

- (1) Provide an avenue for further exploration and development of research outputs,
- (2) Provide a forum for the productive exchange of ideas and sharing of experiences among academicians, practitioners, and stakeholders,
- (3) Provide opportunities for researchers to disseminate relevant research in wide range of discipline within the country, and
- (4) Enable participants to establish networks and mutually beneficial partnerships with professionals from other HEIs and the stakeholders.

RESEARCH AREAS

- (1) Responsive Health System
- (2) Food Safety and Security
- (3) Science, Technology, and Innovation
- (4) Art, Business, Education, Social Sciences, and Policy Formulation
- (5) Environmental Management and Disaster Risk Reduction

MESSAGE FROM THE UNIVERSITY PRESIDENT

Dr. Arnold E. Velasco

**UNIVERSITY PRESIDENT
TARLAC STATE UNIVERSITY**



Today marks a meaningful and timely event as the University Research Office has come up with the **2nd National Research Conference** with the theme “Fostering Resiliency, Innovation, and Collaboration through Meaningful Research.”

The objectives of this forum will offer a venue for further investigation and development of research outputs, a forum for the fruitful exchange of ideas and experiences among stakeholders, chances for researchers to disseminate pertinent Research in a variety of disciplines within the nation, and opportunities to build networks with various HEIs.

Our resource speakers, including yours, will indeed contribute to the knowledge and understanding of Research.

Let us keep taking steps in this direction for our professional growth and additional learning.

Furthermore, I wholeheartedly applaud the initiative of the URO spearheaded by Dr. Robert V. Marcos with his unit heads and staff. This will be a beneficial conference for us in the academe. May you continue to be an inspiration to encourage our dear colleagues in the university to conduct and publish Research.

Participating in this critical conference means you are open to gaining knowledge and upskilling for professional development.

Thank you very much.

MESSAGE FROM THE VICE PRESIDENT FOR RESEARCH AND EXTENSION SERVICES



Dr. Murphy P. Mohammed

**VICE PRESIDENT FOR R.E.S
TARLAC STATE UNIVERSITY**

Dear colleagues, visitors, guest, ladies, and gentlemen, a pleasant morning to each one of us.

With the challenges we have faced for the past years brought by the pandemic and different natural disasters; I am reminded of the importance and impact of research and development. Research has always been one of the priorities of Tarlac State University (TSU) since its first operation which is why this **2nd National Research Conference**, we are delighted to welcome you with the theme: **Fostering Resiliency, Innovation, and Collaboration through Meaningful Research.**

It is high time that such an event took place to highlight the remarkable contribution of research in so many areas of our lives. As researchers and public servants, we need to make sure that we don't only talk, but we walk the talk and I'm glad that during this research conference, we will be showcasing technology, science, and innovation which have been produced in the past years so that our people can relate that technology, science, and innovation is really for them.

We look forward to disseminating the knowledge to everyone seeking advanced exposure through this national level conference. A glance through the list of presentations planned for the next few days will reveal the amazing diversity of these research. All of these could be done but through the collaborative efforts of everyone.

I am sure you will have fruitful and rewarding exchanges in the next few days. I wish you every success with this important conference and I look forward to learning about the outcome.

Thank you so much and mabuhay!

MESSAGE FROM THE DIRECTOR OF THE UNIVERSITY RESEARCH OFFICE

Dr. Robert V. Marcos
**DIRECTOR, U.R.O.
TARLAC STATE UNIVERSITY**



Esteemed colleagues,

There has never been a better opportunity to talk about resilience, innovation, and collaboration in research, in life!

Our organization is one with the academia, in celebrating that the research community thrives despite the pandemic. While our institutions are at varying stages of recovery from such, our pursuit of knowledge knows no restraint.

ANBC or **Aguman Ning Belwan** (Society of Knowledge) **C**onferences is the continuing beneficence of TSU Research Office in advancing rediscovered knowledge beyond university perimeters to create a future proof research environment for all stakeholders.

However, we still have a lot of ground to cover and a lot to discuss, so ANBC 2022 is aimed to selflessly fill identified gaps. We seize chances of learning from our plenary speakers and from all the paper presentations in the hope of singling-out opportunities to create more of the same.

We are enthusiastic about the opportunity to host a cutting-edge hybrid conference and reach a larger audience. It is anticipated that attendees from local institutions and overseas alike would actively engage in this event. We are hoping that these encounters will allow us to interact, exchange ideas, and benefit from one another. Our solidarity motivates us to conduct groundbreaking research papers, fortify education, and continue transforming lives.

With great pride and enthusiasm, I welcome you to ANBC 2022. I am certain that this conference will be stimulating and productive.

Learn from the conference sessions, grow with everybody in the conference and do not forget to enjoy Subic!

Robert V. Marcos, Ph.D.
Conference Convenor

MEET THE PLENARY SPEAKERS

Dr. Arnold E. Velasco
PH.D. IN DEVELOPMENT EDUCATION

Prior to returning to his alma mater, Dr. Arnold E. Velasco worked at Tarlac Agricultural University from 1998 to July 2022 as the Institute Dean for the College of Education, Director for Admission and Registration Services, Director for Research and Development, Chair, Project Management Committee, and Vice President for Academic Affairs, where he spearheaded MOAs and collaborations with Universities and Non-Government Organizations.



He earned his bachelor's degree in electrical engineering at Tarlac State University before pursuing his Master's degree in Mathematics and his doctorate in Development Education at Tarlac Agricultural University.

His research interests include rice farming technology and education, most of which have been financed, published, and presented at local and international research conferences such as Malaysia. His wife, Dr. Lauren T. Velasco, is likewise a committed Education Supervisor at the DepEd - Pangasinan. They are raising their three young sons in their hometown of Malasiqui.

Our plenary speaker is a respected professor, seasoned researcher, and the current President of Tarlac State University.

Dr. Marie Paz E. Morales
PH.D. IN SCIENCE EDUCATION (PHYSICS)



Our plenary speaker is the Director of the Philippine Normal University- Publication Office and the Chair of the National Research Council of the Philippines' Division of Governmental, Educational, and International Policies. She finished Magna Cum Laude and was a DOST scholar in Physics Teaching at the Philippine Normal University prior to taking on these posts. She earned her Master's degree in Science Teaching with distinction from Dela Salle University Manila. She eventually earned her PhD in Science Education with a major in Physics at the same university, where she received the Outstanding Dissertation Award.

Since 2017, her scientific publications have been published in Scopus-indexed journals, and she has received citation awards and research grants. Her positions as editor-in-chief of The Normal Lights (PNU) and the Asia Pacific Higher Education Research Journal landed her a prominent position as a research paper reviewer at the University of Canterbury in New Zealand. She was just appointed University Professor at Philippine Normal University.

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ABSTRACTS



IN-PERSON PRESENTATION

Disaster Resilience of Communities in Tarlac: Basis of Advocacy Plan to Strengthen the Emergency Response Mechanism

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Disasters are events of huge magnitude and negative impacts on society and environment. The causes of disasters are considered, generally, low probability-high impact events, meaning, they are events with low probability of occurrence but with high impact on the community or the environment. This study entitled Disaster Resilience of Communities in Tarlac: Basis for Advocacy Plan to Strengthen the Emergency Response Mechanism was conducted to three hundred sixteen (316) respondents who are barangay officials and tanods, purok leaders and MDRRMO personnel of La Paz, Tarlac. The major purpose of this study is to determine the undertakings of three (3) groups of respondents with regards to disaster response of MDRRMO during flood, to identify the challenges encountered by the three (3) group of respondents towards disaster response of MDRRMO and to formulate advocacy plan to strengthen the emergency response of MDRRMO of La Paz. This study utilized quantitative research design as a tool. On the assessment of the respondents with regards to disaster response of Municipal Disaster Risk Reduction and Management Office (MDRRMO) of La Paz during flood, the group of MDRRMO has an assessment of Always, with a mean score of 3.84, while the group of Purok Leader has also an overall assessment of Always, with a mean score of 3.33. And lastly, the group of Barangay Officials has same assessment of Always, with a mean score of 3.34. On the challenges encountered towards disaster response of Municipal Disaster Risk Reduction and Management Office (MDRRMO) of La Paz, the group of MDRRMO has an assessment of Not Serious, with a mean score of 1.56, while the group of Purok Leader has also an overall assessment of Least Serious, with a mean score of 2.39. And lastly, the group of Barangay Officials has same assessment of Least Serious, with a mean score of 2.32. The variable After Flooding Incidents obtains the highest mean score of 2.13, interpreted as Least Serious, followed by the variable Before Flooding with mean score of 2.10, interpreted as Least Serious, while variable MDRRMO gets a mean score of 2.08, interpreted also as Least Serious. And lastly, the variable During Flooding Incidents finds the lowest a mean score of 2.06, interpreted also as Least Serious. An advocacy plan aimed at aiding Local officials was recommended.

Keywords: risk reduction, disaster response, disaster resilience, disaster management, disaster preparedness

Levels of Depression, Anxiety, Stress (DAS) And Coping Strategies of Students in the Course of Super Typhoon Rai (Odette)

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The study aims to determine the level of depression, anxiety, stress (DAS) and coping strategies applied in the course of Typhoon Odette. The study utilized a quantitative research design to measure the levels of depression, anxiety, and stress and determine the coping strategies. The respondents of this study are the 522 students of Bohol Island State University – Balilihan Campus. To measure the levels of DAS and determine the coping strategies, Depression Anxiety Stress Scale and Brief Coping Orientation to Problems Experienced (Brief-COPE) Inventory was utilized, respectively. The data gathered was analyzed through t-test and single factor analysis of variance. The results show that depression, anxiety, and stress of the respondents are rarely experienced. The coping strategies that were commonly employed are relying on a divine being, resorting to the use of substance, and formulating strategic plans for survival. Despite the unfavorable outcomes brought by the calamity, they were able to move on and learned from the experience.

Keywords: Typhoon Odette, depression, anxiety and stress, coping strategies, mental health

Tertiary Students' Assessment of Competencies and their Correlates: Implications to Curriculum Enhancement

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The main goal of education is to prepare students for successful employment after they graduate and apply for jobs. Consequently, schools must continually endeavor to provide students with a relevant curriculum that will develop students' competencies required for commendable work performance. This study aimed to determine students' competencies in four areas: namely, managing self, communication skills, managing people's tasks, and mobilizing innovation and change through self-assessment. The students' competencies were correlated to profile variables that include age, gender, year level, General Weighted Average (GWA), and senior high school track. Respondents of the study were 178 students taking up Bachelor of Science in Environmental Science (BSES). A questionnaire adopted from the study of Evers *et al.* (1998), was used to gather data from the respondents. Data were analyzed with the aid of frequency, percent, mean, and Pearson's Chi-square. Findings revealed that students were generally above average in all four areas of competencies. Mobilizing innovation and change had the highest composite mean of 3.75 (above average) and the lowest is managing people's tasks (3.68, above average). However, it is important to consider specific indicators where students felt they were only average even though the overall level of competency was above average. These are problem-solving and analytical skills under managing self and leadership skills under managing people's tasks. Further findings showed that gender was positively correlated to visioning, creativity, and innovation skills; year level was significantly correlated to problem-solving and analytical skills and leadership skills, and the students' General Weighted Averages (GWA) was correlated to time management skills, problem-solving and analytical skills, written communication skills, risk-taking skills, and planning and organization skills. Age and the senior high school track were found to have no significant correlation with students' self-assessed competencies. The study concludes that BSES students generally have a high level of self-assessed competencies, except for leadership skills and problem-solving and analytical skills. Also, gender, year level, and GWA influenced some aspects of students' competencies. The study recommends the development and implementation of programs to enhance students' competencies in leadership, problem-solving and analytical skills, as these were found to be their weaknesses.

Keywords: Self-assessment, correlates, competencies, managing self, communication skills, managing people's tasks, mobilizing innovation and change

The Impact of Sexuality Education on the Incidence of Teenage Pregnancy in Region 10

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Teenage pregnancy is a worldwide problem that has prompted numerous campaigns and increased public awareness in an effort to reduce its incidence. The total number of occurrences of this phenomenon increases every year. The Philippines is one of the Asian countries in a similar situation. The incidence of adolescent pregnancy has increased in the Philippines. Adults and adolescents discussed sexual matters infrequently. Thus, adolescents have limited or no understanding of the biological changes that occur in their bodies during the period of transition from adolescence to adulthood. This has resulted in unwanted pregnancies among the vast majority of adolescents, which has grave developmental and socioeconomic repercussions. Researchers from Northern Bukidnon State College in partnership with the National Economic and Development Authority (NEDA) Region X, aimed to determine the impact of sexuality education on the incidence of teenage pregnancy in Region X from 2017 to 2020. The study utilized a total sample size of one thousand eight hundred and six (1806) respondents. Data was collected using questionnaires, in-depth interviews, and focus group discussions. Results showed that sexuality education was mostly introduced in Grades 7 to 10, and most of the respondents got pregnant at the ages of 17, 18, and 19. Moreover, the Internet, as the primary source of sexuality education, self-desire, and a high dropout rate, were identified as the leading causes of adolescent pregnancy in the study area. Additionally, concealing sexual knowledge, a poor parent-child relationship, and a lack of community affiliation made the youth more inquisitive and vulnerable. Parents and schools must empower youth through sex education in order to equip them with the knowledge necessary to combat potentially erroneous information spread through social media and friends. The study will help students, parents, teachers, and people who work to help vulnerable groups in the community.

Keywords: teenage pregnancy, sexuality education, region 10, internet

Spider Diversity in Selected Falls of Southeastern Mindanao

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Spiders are poorly studied in Southeast Asian countries like the Philippines. This study was conducted at three selected falls of Southeastern Mindanao to determine the species richness and abundance of the spider fauna (Araneae) in the area. Conventional collection techniques like sweep netting, beat netting, pitfall trapping and vial-tapping were used. A total of 579 spiders were collected and sorted to 231 species belonging to 113 genera and 29 families were recorded during the study. Thirty-six species are possible new species and family Phyxelididae, two genera, *Savarna* and *Parabathippus* and seven species are new records in Mindanao. Based on richness estimates computed, the continually rising accumulation curves of the majority of the estimators would signify that the true species richness in the surveyed areas might exceed 579 species, and probably much more. Highest species diversity was documented in Epol falls located at Marilog District, Davao City. However, Tagbibinta Falls in Maragusan, Compostela Valley seems to be a distinct site because of the unique species found in the area. The possibly new species and new records for Mindanao emphasize the need to further explore the rich spider fauna in waterfalls.

Keywords: Araneae, Abundance, Biodiversity, Species richness, Techniques.

Mga Tigsik ni Engr. Abdon Balde Jr: Pagsusuring Pangnilalaman sa mga Piling Paelektronikong Tulang Bikolnon sa Kontemporanyong Panahon

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Sinaliksik sa pag-aaral na ito ang hinggil sa tradisyonal na pasalindilang tula ng mga Bikolano na ngayon ay pinalalaganap na sa paraang pa-elektroniko—Ang tigsik. Tampok dito ang 267 paelektronikong tula ni Engr. Abdon B. Balde Jr. Sa pamamagitan ng mabusising pagsusuring pangnilalaman sa bawat tigsik, inalam ng mga mananaliksik ang estruktural na katangian ng mga tula kagaya ng sukat, tugma, sesura, at uri ng taludturan. Binusisi rin ang katangiang pampanitikan at pangkultura ng mga tigsik sa pamamagitan ng pagtukoy sa mga ginamit na idyomatikong pahayag, tayutay, at mga sagisag kultural na nakapaloob sa bawat tigsik. Natuklasang karaniwang wawaluhin ang mga tigsik ni Balde subalit may mangilan-ngilan ding may ibang sukat. Monorima ang karaniwang tugmaan ng mga tigsik at walang sesura ang karamihan sa mga ito. Kuwarteto ang uri ng taludturang kinabibilangan ng mas nakararaming tigsik. Samantala, ang mga tigsik ni Balde ay mayaman sa mga idyomatikong pahayag, tayutay, at mga sagisag kultural. Pinatutunayan ng kaniyang mga akda na ang mga ito ay tunay na repleksiyon ng kultura, paniniwala, at kaugalian ng mga Bikolano. Ito ang nagtulak sa mga mananaliksik, partikular sa punong mananaliksik na bumuo ng isang aklat-katipunan na may pamagat na Sa Laot ng mga Talinghaga, upang mas lalo pang mapayaman at mapalaganap ang natatanging paraan ng pagtula ng mga Bikolano.

Mga Susing Salita: Tigsik, Tula, literatura, pagsusuring pangnilalaman, Bikol

Freshmen Students' Knowledge About Climate Change and Its Effects

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Raising knowledge and awareness about climate change is crucial in prompting people to engage in climate change action. If the response to climate change is slow, it will be harder for both people and wild animals to survive. Droughts will be more frequent and extreme, storms, heat waves, rising sea levels, melting glaciers, and warmer oceans can all directly injure animals, destroy the habitats they rely on for survival, and have a disastrous impact on people's way of life and communities. The study aims to determine the knowledge of students about climate change and its effects. The respondents are 132 freshmen students selected randomly from a total of 198 students enrolled in Science, Technology, and Society under the researcher's tutelage. The knowledge of students was determined before the discussion about climate change. The findings of the study showed that while most respondents have a correct understanding of what climate change is (62.88%), there is still a sizable percentage of students who are misinformed. In addition, the respondents are aware that greenhouse gases (87.12%), deforestation (57.58%), and excessive fertilizer use (37.88%) all contribute to the global climate change that is now taking place. However, the unimpressive responses to the other climate change causes show that students did not have a thorough understanding of these factors. Most respondents know that the consequences of climate change include excessive rain (96.21%), flood (95.45%), and melting of snow (94.70%). But the response to "drought" as a consequence of climate change was low (47.73%). As to the respondents' knowledge of the effects of climate change on health, most students know water-borne diseases like diarrhea, skin diseases, and typhoid but some expressed their lack of knowledge about other diseases that climate change may possibly cause such as cancer and mental health issues. Further findings show that the respondents have a correct perception of climate change, and they are optimistic that it is not yet too late to address climate change problems. The F-value of 0.021 and p-value of 0.82 to compare the perceptions of the respondents with respect to gender support the acceptance of the null hypothesis. Climate change perceptions are not influenced by gender. The study concludes that students have knowledge of climate change but not wide enough, especially on the health effects. The study recommends strengthening the integration of climate change into school policies and programs and its reinforcement in the teaching and learning plans. Science, Technology, and Society is a mandated course in all tertiary programs and climate change is a topic included. Teachers handling the course should ensure that students' knowledge about climate change is deepened and students' involvement in climate change action is increased.

Keywords: Climate change, causes of climate change, consequences of climate change, health effects of climate change, perceptions,

Narratives on Obtaining Free and Prior Informed Consent of IPs in Northern Mindanao, Philippines

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This narrative was prompted by a research project examining the cultural and creative industries (CCI) involving indigenous peoples (IPs) in Northern Mindanao, with the objective of maximizing the social and economic potential of the region's cultural assets and products. This project examines the role of higher education institutions throughout the process of developing creative and cultural industries in the region in terms of technical training, science-based interventions, policy recommendations, and preservation of cultural heritage. The goal of this research project is to contribute to the enhancement of the region's creative and cultural economy. Obtaining the prior and unrestricted consent of the indigenous peoples of the designated communities is crucial for the conduct of this project. Indigenous People's Rights Act (Republic Act No. 8371, Republic of the Philippines 1997) stipulates that this must be done prior to conducting any research with IPs; however, due to the lengthy and costly nature of the process, only a handful of researchers have gone through with it. The purpose of this paper is to share the project team's experiences in promoting an ethical process for IP research and to provide recommendations to help facilitate the process.

Zarzuela: An Ilocano Cultural Heritage

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The study determines the contribution of the Zarzuela Ilocana in terms of values, talents, and economic aspects. The study supports the mandate of the National Commission for Culture and Arts'; to preserve, promote and safeguard intangible cultural heritage. The Philippine Heritage Law also abides by which aesthetic and cultural values as cultural properties. The researcher conducted a narrative inquiry approach to interview respondents who have watched zarzuela ilocana and share their stories and observation regarding the contribution of zarzuela ilocana towards values. Talents, to the, conducted a narrative inquiry approach to the economy. Collected data were transcribed and translated. Zarzuela ilocana teaches Ilocano values individualism or "agwayas" and deeds like "Awan ti pagladingitan, a dinto masupapacan". Talent development for entertainment has been the contribution to the performers. Economic aspects share an opportunity for business partnership and sponsorship, extending the show circulation to other provinces like Abra, Kalinga, Apayao, La Union, and Ilocos Norte.

Keywords: zarzuela ilocana, zarzuela, cultural heritage, social science, vigan city, metro-vigan, Philippines

Knowledge, Attitude, And Practices of Abaca Craft Producers: Philippine Illustrations

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The study determined the knowledge, attitude, and practices of abaca craft producers in Marihatag, Surigao del Sur, Philippines. Specifically, the study sought to determine the socio-demographic profile and the knowledge, attitude, and practices in abaca craft production of the respondents. This study used a mixed methods research design involving 134 abaca craft producers, who were selected through a random sampling. The results indicated that respondents are 41 or older (41.8%), female (78.4%), have finished secondary level education (55.2%), have 5 to 6 dependents (38.06%), are married (70.9%), have been an abaca craft producer for less than a year (41.4%), and have attended 1 to 2 trainings (46.27%) on abaca craft production. It was found that the level of knowledge, attitude, and practices still needs improvement, with mean values of 3.46, 3.62, and 3.70, respectively. The intervention tools, therefore, should be developed to enhance knowledge, attitudes, and practices, particularly product development training and marketing support, due to the limited market area and the need to adapt to modern methods of marketing. A proposal for a product development project for abaca craft producers is hereby recommended.

Keywords: Knowledge, attitude, practices, abaca craft producers

Antecedents and Consequence of Satisfaction Towards Online Food Delivery (OFD) Applications: A Modified UTAUT Model Perspective

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This study endeavored to investigate users' behavioral intentions towards OFD applications, modifying the Unified Theory of Acceptance and Use of Technology (UTAUT2) Framework by including hedonic motivation as the additional component. Four hundred eleven (411) OFD app users who live in Tarlac Province, Philippines were found using snowball sampling. A predictive-correlational research methodology through PLS-SEM was utilized for this study. Hedonic motivation's impact on satisfaction and behavioral intention based on PLS equation modeling was established. Further, satisfaction and the relationships between effort expectancy, facilitating conditions, and performance expectancy were noted. Social influence and satisfaction with behavioral intention also had a favorable and significant effect. The study offers a theoretical contribution and presents sound conclusions for researchers and professionals involved in fields related to OFD apps.

Keywords: Modified UTAUT2, OFD Apps, Behavioral Intention, Hedonic Motivation, Structural Equation Model

Service Delivery of Local Government Officials in a Philippine Rural Community

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This study assessed the service delivery of local government officials in the municipality of Marihatag, Surigao del Sur, Philippines. Specifically, it aimed to determine the demographic profile of the respondents, extent of implementation of the basic services provided by the local government officials in the rural community, the status of implementation of service delivery skills training programs, and the problems encountered by the local officials in the delivery of basic services. A mixed-methods design was used in the 12 communities, utilizing a questionnaire to gather data from 73 local government officials and 319 residents. Based on the findings of the study, the majority of the agricultural support services were implemented; health and social services are fully implemented; services and facilities related to environmental sanitation are implemented; infrastructure facilities are fully implemented; and the information and reading center is partially implemented. As to the service delivery skills training programs, they are implemented by the local government unit. The topmost problem encountered by the local officials in the implementation of basic service delivery is the lack of community participation. A proposal for rural community's empowerment and good governance development projects is recommended as part of a community social responsibility.

Keywords: service delivery; rural community; local government unit; basic services; implementation

Incidence of Adolescent Pregnancy Pre and Post-Pandemic in Region X

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Teenage pregnancy is a global issue that affects both developed and developing countries even before the pandemic. According to World Health Organization (WHO), teenage or adolescent pregnancy occurs when a female between the ages of 10 and 19 becomes sexually active and becomes pregnant, either intentionally or unintentionally. The Philippines is one of several Southeast Asian countries in a similar situation. In Northern Mindanao, the incidence of teenage pregnancy has reduced from 14.7 percent in 2017 to five percent in 2019, however, some local reports cited an increased incidence in teenage pregnancy during the pandemic. Existing evidence of predictors of the incidence of teenage pregnancy prior to the pandemic has not been assessed rigorously, more so during the pandemic. The research study sought to determine the factors influencing the incidence of teenage pregnancy in Region X before and during the pandemic covering the years 2017 to 2021. Its aim is to propose more direct and focused interventions to help mitigate the adolescent pregnancy in the region especially during the post pandemic period.

Employability Study of College of Business and Management Graduates for the Academic Year 2015-2017 of North Eastern Mindanao State University

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Aim: The study assessed the employability of graduates of the College of Business and Management for the academic years 2015–2017 of North Eastern Mindanao State University. The study was conducted to evaluate the respondents' socio-demographic profiles and their employability status.

Methodology: The research utilized a quantitative descriptive design, using survey questionnaires through purposive sampling.

Results: The results of the study revealed that out of 926 respondents, 67% are employed. Out of the total employed graduates, 37% are in regular status, 78% are employed in private institutions, and 98% are working in the local area. On the other hand, 25% are unemployed and 2% are self-employed. The reasons why they are unemployed are mostly family concerns and a decision not to find a job (29%). In terms of competency, most of the respondents' generic skills applied and found useful in jobs were communication and entrepreneurial skills.

Conclusion: Despite the fact that there is no statistically significant correlation between the respondents' socio-demographic profiles and their employment status (or competency), the institution must continue to enhance its faculty development programs, curricula, and student support services.

Keywords: business management, employability, graduates, tracer study, college of business and management

Experiences And Challenges Encountered of Students and Faculty in the Implementation of Flexible Learning in the New Normal

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The study assessed the experiences and challenges of the faculty and students of North Eastern Mindanao State University in the implementation of flexible learning during the pandemic period. This study used a qualitative research design utilizing an interview guide involving 18 faculty members and 30 students from the university's offsite class located in Marihatag, Surigao del Sur. Deductive thematic analysis was used in the interpretation and coding of data. Specifically, it evaluated the socio-demographic profile of the participants and their experiences and challenges in a flexible learning approach. Research findings indicated that most of the faculty owned a mobile phone, which is 89.5%, and only 68% of the students owned a mobile phone. The major challenges encountered by faculty and students in the implementation of flexible learning are caused by the technological limitations in terms of internet connectivity and online learning devices. Universities, in partnership with the local governments, may consider providing a budget for internet connections and available communication tools as a form of student assistance. The provision of faculty development programs such as refresher courses on flexible learning and student support systems, particularly on the aspect of technology, is recommended to address the identified gaps. Furthermore, the institution should also adopt a policy allowing for limited face-to-face classes in cooperation with higher authorities.

Keywords: experiences; challenges; faculty; students; flexible learning

Perceived Stress and Life Satisfaction among University Students

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Literature and research have indicated that the COVID-19 pandemic's prevalence increases people's susceptibility to mental health issues. In addition to the intellectual, psychological, and financial difficulties associated with joining universities, this is a further source of anxiety for university students in the Philippines. The number of students seeking counseling has increased since the pandemic started in March 2021, and this trend has persisted when educational institutions switched from online/virtual learning to in-person sessions. This study sought to determine whether there was a relationship between perceived stress and life satisfaction among 295 university students and how instructors and counselors could continue to support them.

University students reported moderate levels of stress throughout the epidemic, but statistical analysis of their responses to online questionnaires about perceived stress and life satisfaction found that, despite this, they are surprisingly satisfied with their lives overall. This is related to several issues that were tackled during the focus groups discussion. However, there was a significant negative relationship between perceived stress and life satisfaction. The level of respondents' life satisfaction can decrease in direct proportion to an increase in their perceived stress. The study's implications, limitations, and recommendations for counseling program development and further research were discussed.

Keywords: perceived stress, life satisfaction, university students

#NanayNaSiNene: A Qualitative Descriptive Analysis of the Experiences of Adolescent Mothers of Northern Mindanao

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Different communities' attitudes toward adolescent pregnancy vary; because of this, how these adolescent mothers view and take their experiences, their *'self'*, and their community also vary. Our study looks into the narrative of the young mothers of Northern Mindanao in terms of their emotions and thoughts about being a mother and starting a family at a very young age. We also explore the varied experiences of teenage mothers who were not abandoned by their partners, those who were abandoned or separated, and those who were abused. Their perception of the attitude of their local community towards teenage pregnancy was also explored. The narrative of our research participants provided us with rich data to analyze and significant points to work with the local government of Northern Mindanao in the creation and implementation of a preventive program.

Keywords: adolescent; pregnancy; motherhood

Needs Assessment Study for Comprehensive Review Program ReFLextoTeach for BSEd Mathematics Graduates

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The Philippine Higher Education Institutions (HEIs) are continuously concerned with producing quality and competent outputs as products of quality teaching. Though there are various parameters to consider in evaluating the performance of a program, the only recognized qualification standards in the country is the graduates' performance in the licensure examination. This serves as an affirmative evidence to measure the quality and standard of education a college is providing thus, HEIs continually offer programs and services to improve their graduates' performance in the licensure examinations. The Mindoro State University College of Teacher Education conducts review classes for pre-service teachers, however, offering the same to graduates become a pressing need as enrolling in review center is quite expensive. Because of this, the researchers aims to conduct an extension program offering comprehensive review to the BSEd graduates. To do so, a needs assessment should be done first, thus, this study is conducted. This study employs descriptive method of research utilizing documentary analysis, and diagnostic test item analysis. The diagnostic test is given to 35 BSEd graduates who have not yet passed the licensure examination for teachers. The respondents are selected through simple random sampling. Mean, frequency percentage, standard deviations, percentage of correct response, and mean percentage scores are used in this study. The result of the study serves as the baseline data for the formulation of the extension project ReFLextoTeach which aims to provide review classes for BSEd Mathematics graduates all over the province through the flexible learning modality.

Keywords: licensure examination for teachers, BSEd Mathematics graduates, extension program, needs assessment, review classes, flexible learning, descriptive study

The Abellens of Moriones, Tarlac: A Preliminary Historical and Socio-Cultural Account

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This ethnographic research work is an attempt at understanding the Abelling culture in particular, and its relation to their Territoriality.

The study was conducted among the Abellens living at Sitio Socorro, Moriones, San Jose, Tarlac. Since the study made use of ethnography, the whole tribal group was included in the observation.

The research techniques used were semi-structured interviewing, and participant observation. Process documentation, oral testimonies and life histories of men and women were also taken to support the data gathering process. Since time among the Aetas is correlated with the seasons, the researcher experienced living with the group during those particular times in order to further support and understand previously gathered data.

The Aytas living in Sitio Socorro are Abellen Aytas. Although physically, they still possesses similar characteristics to the Aytas, they however differentiated themselves by geographical location as occupying the western part of Tarlac with movement coming from the Zambales boundaries in contrary to the movement of the Ayta Mag-anchis as occupying the Pampanga-Tarlac Area. In terms of language, indeed they claim that theirs is Hambali or Ilocano based rather than capampangan based. Physically, they at present have already slight differentiations with the Ayta Mag anchii as the Mag anchii have a more curly hair and darker skin coloring. The Abellen have less curly hair and lighter skin coloring and are more stable in terms of the establishment of their residences.

Keywords: Ayta, Aeta, Ayta Abellen

Implementation of SHA 256 and Encrypted QR code in Routing Electronic Document

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Doing inter-office routing of document can be very frustrating especially when the offices are separated by different buildings or campuses. It can be time consuming and requires a lot of effort, time, and cost sometimes. The security of document while on route depends on the security and confidentiality practices of each signatory. These challenges can be address by implementing an electronic document routing system using available algorithms like SHA for document security and hashing, Encrypted QR Code using AES for encryption of the document/file so that it will not be accessed by un-authorized entities and will require a decryption key for document validation. Email Notification will be used to update the requestor every time a signatory approves the request. The use of Rapid Application development methodology and its stages (Analysis/Quick Design, Prototype Stages including Build, Demonstrate and Refine, Testing and Implementation) as part of the Research and Development cycle contributed to the success of an electronic document routing system leading to 100% document integrity during routing, 97.45% time improvement in terms of routing time comparing the time incurred in the traditional paper-based vs the electronic one using the change percentage formula, and an overall acceptability level of 4.64 with a verbal description of Highly Accepted results through interviews, survey questionnaires and user acceptance testing/evaluation adapting ISO 25010 acceptance criteria.

Technical Loss Reduction on Feeder-3 of an Electric Cooperative in Pampanga, Anao Substation by Feeder Reconductoring

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A technical loss reduction program has been activated by distribution utilities due to the increasing electricity demand. This paper focuses on the analysis of reconductoring the existing Feeder 3 with 3-phase, 2/0 conductors, ACSR, and 19.6 km in length. Feeder reconductoring is a technique where the existing conductor of the feeder is replaced by a more prominent conductor of optimal size and length. Two alternatives had been proposed; 4/0 conductor size was proposed in Alternative 1, while 336 size conductor was proposed in Alternative 2 in reconductoring the existing feeder. Technical loss reduction analysis, voltage regulation analysis, and cost-benefit analysis were performed to determine what alternative reduce the technical loss significantly, improve the voltage regulation, increase the capacity of the wire and be more economical to the distribution utility. Considering the results, Alternative 2 accounts for the highest reduction in technical loss, with an average of 65.8% technical loss reduction from 2022 to 2023. Also, Alternative 2 has the most significant improvement in voltage regulation with an average of 1.39% regulation due to low voltage drop. In terms of economic factors, implementing Alternative 2 is more beneficial to the distribution utility and can save 1,532.54 MWh of energy from 2022 to 2031. If converted into a monetary unit, the distribution utility can save Php 14,620,462.32. Implementing Alternative 2 is attainable and justifiable since the Benefit/Cost ratio is greater than 1.

Keywords: Technical Loss, Reconductoring, Electric Cooperative

Environmental-Related Practices, Programs and Measures

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The study was conducted to assess the environmental-related practices, programs and measures particularly the solid waste management and sanitation of the Municipality of Balilihan. Descriptive-survey method with the aid of a self-made questionnaire was used in the study. The questionnaire has two parts namely: solid waste management practices and programs and the sanitation practices and programs. Results show that most of the respondents oftentimes observe proper solid waste management, and the implementation of the environment programs are oftentimes observed. Majority of the respondents always practiced the proper sanitation practices as well as the programs and measures. The study concludes that environmental related practices are consistently done in the household, market, and school. This result means that the environment programs and measures were known to respondents although did not fully support the programs. Sanitation practices in three areas were also consistently done. The programs and measures of sanitation were only oftentimes practiced. The study recommended that the Local Government Unit of Balilihan must engage in massive campaigns and information dissemination drive and other means of obtaining information. The strict implementation of the solid waste management programs and measures must be strengthened so that people will be vigilant on environmental issues. The resident has to intensify their action in managing their waste and monitor the programs. It is also recommended that the school officials must inculcate in the curriculum the environmental practices and programs so that students will be guided in their actions towards managing their waste and observing proper sanitation.

Cell Sensitivity Assay and Cell Viability of Breast Cancer Cell (MCF7) Using MTT Assay of Ashitaba (*Angelica keiskei*) Leaf Extract

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The 3-(4,5-dimethylethylthiazol-2-yl)-2,5 diphenyltetrazolium bromide (MTT) assay was used to investigate *Angelica keiskei* *Koiz mi* (Asitaba in Japanese), a perennial plant belonging to the Umbelliferae family, for its cytotoxic effect against breast cancer cells or MCF, to an insoluble purple formazan by the action of mitochondrial reductase. Formazan is then solubilized and the concentration determined by optical density at 570 nm. The plant extract is not cytotoxic to breast cancer cells and has no impact even at high concentrations. These findings indicate that the plant extract has a detrimental effect on the cell. Furthermore, prior to testing, the components of the plant extract must be extracted.

Development of an Improved Alcohol (Ethanol) -Based Hand Sanitizer (ABHS) Formulation through the Incorporation of Ylang-Ylang Essential Oil (Phase 1)

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Due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) epidemic, which causes coronavirus sickness (COVID-19), international, national, and local governments are taking steps to mitigate the disease's impact. Personal hygiene and periodic disinfection are two methods for preventing the transmission of this virus. Hand sanitizer is one of the most popular and effective ways to disinfect our skin. The World Health Organization (WHO) has developed an alcohol-based hand sanitizer (ABHS) formulation that they have made available as guidelines for organizations interested in developing ABHSs. Although the formulation is suitable for antimicrobial topical use, one drawback observed was its distinct chemical odor, which has a consequence on its overall feel. This study sought to address this issue by incorporating ylang-ylang essential oil into the formulation. In this study, the researchers used a descriptive developmental research design. The study was conducted by preparing ABHS from a initial formulation and testing its consumer acceptability and skin tolerability using validated survey questionnaires adapted from the WHO. The survey results were compared to the ABHS acceptability and tolerability criteria set by WHO and were utilized to make required changes to the ABHS formulation until excellent acceptability results were obtained. After two (2) rounds of optimization, the empirical data provided demonstrate that the ABHS formulation produced met the WHO acceptability and skin tolerability standards. In this work, an alcohol-based hand sanitizer formulation with good consumer appeal and skin tolerability was developed.

Keywords: Alcohol-based hand sanitizer, Ylang-ylang, Glycerol, Skin tolerability, Hand hygiene

Vehicle Management System With Genetic Algorithm Scheduling

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This study aims to develop and design Vehicle Management System with Genetic Algorithm Scheduling for the Tarlac Agricultural University that will help with fast transaction and digitization of process. To avail of the service vehicle, the employee should have an approved travel order, and the service vehicle request, in this case, is done manually. Besides, assigning vehicles is not an option to manage but is a necessity. Moreover, one of these offices that is responsible for the assigning of vehicle use for a trip is the motor pool office. Nevertheless, the office itself has no system software like a vehicle management system. The researchers used Agile Methodology for the development of the system as a guide in developing and improving the system's capability. Genetic Algorithm (GA) utilized the five (5) phases for assigning vehicles for quick scheduling of service requests, such as the initial population, fitness function, selection, crossover, and mutation. The IT experts evaluated the system's acceptability using ISO/IEC 9126 and obtained a grand mean of 4.5, which is "Excellent" and "Highly Acceptable". System Users evaluated the system, gained a grand mean of 4.9, and it was revealed that the Vehicle Management System with Genetic Algorithm Scheduling System is described as "Excellent" and, "Highly Acceptable". Based on feedback from system users, the researchers discovered that the digitized travel order and service vehicle requests system is anticipated to facilitate processing of the locale.

Keywords: Travel Order, Service Request, Trip Ticket, Scheduling, Genetic Algorithm

Design of Food Safety System for Crispy Fried Pork Processing Based on HACCP Principles

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The establishment of a food safety system for products is vital in ensuring the safety of consumers. Hence, this study aimed to design a food safety system for the production of crispy fried pork which is an artisanal product. It utilized a modified Food Inspection Checklist in assessing the compliance of processors to food safety and the codex-based HACCP principles in designing a food safety system for crispy fried pork. The average compliance of food processors to food safety is 13.57% which indicates that their operations impose a major food safety risk to the consumers. The result suggests that the establishment of a food safety management system is essential. The critical control point analysis of the production process identified two CCPs and the reasonable HACCP plan was designed accordingly. Compliance to the HACCP plan prevents the occurrence of food safety hazards in the production of crispy fried pork.

Keywords: HACCP, Crispy fried pork, Critical control points, Food safety, Food hazard

Development of Instant Bule Mix

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The study focuses on developing Instant Bule Mix whose main ingredients were bule, kamias, and tomatoes. This study aims to introduce an instant mix that can be used in cooking a Kapampangan dish “sabo bule”. The study used descriptive developmental research design and also used survey and sensory evaluation to assess the product. The questionnaires were given to two hundred (200) participants from Brgy Valdez, Solib, Poblacion and Gutad Floridablanca Pampanga. The result showed that out of two hundred (200) respondents, the majority are female, age 15 to 20 years old. The respondents are willing to spend P15 on our product. The Instant Bule Mix is found to be very satisfactory in term of appearance, texture and taste. And the Respondents recommend Instant Bule Mix can be another variety of sour soup.

Keywords: bule, instant mix, product development

Mango Sinigang Mix with Purple Yam

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The study focused on developing sinigang mix using the main ingredients of Carabao Mango (*Mangifera indica* L.) with the fusion of Purple Yam (*Dioscoreaalata* L). This study aims to introduce an instant mix that can be used in cooking “Sinigang sa Ube”. The study used a descriptive developmental research design and utilized survey questionnaires and sensory evaluation to assess its appearance, aroma, texture, taste, and market acceptability. The survey questionnaires were given to one hundred (100) participants from the City of San Fernando, Municipalities of San Simon, Porac, and Floridablanca, Pampanga. Among 100 respondents, Ninety- Two (92%) of the respondents’ sensory evaluation of the product generally showed that the Mango Sinigang Mix with Purple Yam is very acceptable in appearance, aroma, texture, taste, and acceptability the product. The Mango sinigang mix with purple yam is highly recommend as a new product in the market as another way of preparing singang soup.

Keywords: Carabao Mango, Purple Yam, Sinigang sa Ube, Product Development

Identification of the Potential Impacts of the Alcohol-Based Hand Sanitizer Project of Tarlac State University

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This research was conducted to identify the potential economic, health, and environmental impacts of the Alcohol-Based Hand Sanitizer (ABHS) Project of Tarlac State University (TSU). A descriptive research method was used, with respondents identified which was based on purposive sampling with 52 TSU employees and students. The data were analyzed using frequency counts, means, and standard deviations. Results indicated that respondents strongly perceived ABHS Project may create additional income and livelihood opportunities for health-based enterprises in the province. Moreover, respondents firmly asserted that the project may help the university combat the transmission of communicable diseases such as the COVID-19 virus. Respondents also claimed that the project will provide a cleaner, pathogen-free environment at the university. Findings of the study may be used as a baseline data, to guide future directions of the project, particularly in the production, institutional use, adoption plans, and the commercialization of alcohol products from the project.

Keywords: Alcohol-Based Hand Sanitizer, Economic Impacts, Health Impacts, Environmental Impacts

Challenges and Coping Mechanisms of Pre-service Teachers on Flexible Learning Modality

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Amidst the global health crisis, higher institutions in the Caraga region in the Philippines formally opened last August 2020. The Philippine education system, just like in other countries, has resorted to flexible learning (FL) to promote continuous education. One type of flexible learning is the modular approach. Thus, this research focuses on the challenges of flexible learning through a modular approach to the pre-service teachers of Surigao Del Sur State University- Tagbina Campus. It also looks into the challenges and coping mechanisms regarding study habits, learning resources, and academics. Interviews were conducted with the students, and their responses were content-analyzed. Finally, the study revealed that the modular approach needs reinforcement of digital and non-digital sources since students do not find the modules enough to understand the concepts. Moreover, students' struggles were the lack of time to answer the modules, inability to comprehend well, and financial constraints that led to the inability to access the internet. Furthermore, they obtained lower grades than during the face-to-face classes. However, they resorted to different ways, such as seeking social support, motivating themselves, and being responsible despite tremendous changes to cope with the challenges of the new panorama of education. Finally, it is recommended that the University have a strategic mechanism on flexible learning modality for both students and teachers.

Keywords: Modular learning, coping mechanism, face-to-face class, preservice teachers, flexible learning modality

Consumers' Intent to Purchase Alcohol-Based Hand Sanitizer (ABHS) with Ylang-Ylang Oil

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In compliance with the standards established by the World Health Organization (WHO) during the pandemic, Tarlac State University heeded the call of the times by producing Alcohol-Based Hand Sanitizer (ABHS) for its employees. The TSU Analytical Testing Laboratory and Natural Products Research Center together with the College of Science led this initiative. Although it was suitable for topical and antibacterial application, the original formulation of ABHS has a distinct chemical odor. The researchers addressed this concern by incorporating the ylang-ylang essential oil produced locally in the municipality of Anao, Tarlac.

Using product knowledge and involvement as independent variables, the customer purchase intention for ABHS was explored after the project has completed its second phase. 180 respondents received the modified questionnaire and to test the research hypotheses, regression analysis was used. The findings indicated that: (1) Consumer's involvement with ABHS with ylang-ylang oil considerably influenced their purchase intention; and (2) Consumers' product knowledge of ABHS with ylang-ylang oil had no sufficient information to establish a discernible influence on purchase intention. These show that respondents choose products based on their needs, preferences, and values than on product brand or label. This confirmed other studies that found consumers who are strongly involved with a product pay less attention to pricing and give more weight to cues relating to information about where the product was made.

Furthermore, the results provided significant marketing channel insights and recommended practical advertising strategies.

Keywords: purchase intention, sanitizer, ylang-ylang, involvement, product knowledge

Country's Research Priorities to the Research Initiative towards a Developed Research Agenda

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This study used a survey research design to determine the relevance of the country's research priorities based on the Commission on Higher Education (CHED), Department of Science and Technology (DOST), and The National Economic and Development Authority (NEDA), to the research initiatives of a Higher Education Institution (HEI) and Bureau of Safety and Environmental Enforcement (BSEE) department. It employed random sampling of enrolled students, parents, alumni, and faculty to analyze discrepancies in the perceptions regarding the degree of applicability, significance, and urgency of the country's research priorities to the department's research initiatives. The focuses include several aspects related to CHED; Technology and education, indigenous renewable energy sources in the domestic energy, program/curricular studies on higher education, disaster risk management (multidisciplinary/multisector), and the national science and technology plan, among others, DOST. The country's research priorities need to be emphasized in the BSEE Department's research agenda and initiatives, as these are all for the sake of achieving their institutional learning outcomes towards developing a skilled and competent workforce in the country's electrical engineering industry.

Keyword: Agenda, Education, Electrical engineering, Initiatives, Priorities, Research

Evaluation of the Implementation of the Information Education Campaign (IEC) on the On-Going Rehabilitation and Clean-Up of the Manila Bay in the Province of Tarlac

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In December of 2008, the Supreme Court of the Philippines upheld the issuance of a writ of mandamus against twelve government agencies to clean up Manila Bay. (Metropolitan Manila Development Authority v. Concerned Residents of Manila Bay) It is important because it is an evidence of the growing general state practice of recognizing the right to a balanced and healthful ecology. The Manila bay as complained by the Concerned Citizens continued to become polluted and these agencies must perform their role in making Manila Bay Clean and Safe. Year after this the Manila Bay Operational Framework Plan has been put into action in order to comply with the continuing mandamus. Included in the framework is to encourage the Local Government Units in the affected areas to conduct Information Education campaigns (IEC) in order to educate their constituents not to pollute anymore the contributory rivers leading to Manila Bay hence this study was proposed. This study tried find out the status of the IEC campaign of DENR and the local government units in the affected municipalities of the Province of Tarlac.

The mixed method of research was utilized in this study. The quantitative method of research was used in determining the status of the IEC activities in high and low performing barangays in the municipalities. The qualitative method of research, on the other hand, was applied in evaluating the effectiveness of the IEC and in identifying the challenges associated with its implementation. There were 720 respondents for this study. Most of the respondents were not knowledgeable about the campaign of DENR/LGU. Among those that are knowledgeable, they cited the LGUs as the source of their information about the clean up drive but usually were exposed to this only once during the Campaign period. Generally, the respondents rated the IEC materials as inadequate and not effective.

Keywords: DENR Supreme Court Mandamus, Manila Bay Clean-up, Information Education Campaign, IEC

Best Practices of NGP: A Discourse of Sustainable Use of Resources and Its Community Development Contributions

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The paper delves into the discussion of the National Greening Program (NGP) at Barangay Gata, San Agustin, Surigao del Sur for 2017 as perceived by the implementors and farmers-beneficiaries. It used mainly the descriptive-survey method, and there were two groups of respondents: the implementor, and farmers-beneficiaries. On the other hand, other research strategies were used like qualitative interviews, observation & FGD. The study revealed that NGP is a very effective measure for reforestation, an effective tool for poverty alleviation, & an excellent mechanism to answer climate change.

Keywords: NGP, DENR, Barangay, Gata, PO's

Healing Practices of the Spiritual Folk Healers of Tandag: A Construct of their Social Reality and Mysticism

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The paper discusses the rituals performed by the diviner or spiritual healer in curing the clients. It involves prayers, chants and elaborate ceremonies addressed to the supreme deity. It combines animistic beliefs with Folk Christian beliefs which had been handed by generations of diviners or healers. A descriptive qualitative method was used aided by the participant and non-participant observations. It can be deduced from the study that Spiritual folk healing practices had been robustly practiced by the healers or diviners with spiritual themes but it is also tented with the mysticism of animism. The diviner or healer is the main officiating person in the curing rituals which is usually assisted by the assistant curer or diviner.

Keywords: Spiritual, diviner, curer, shaman, folk, Mananambal, Tambalon, healer

Characterization of S-3 Medium and its Potential in Growing and Yielding Rice (*Oryza sativa*)

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This study looked at developing an alternative medium for planting. It focused on the characterization of S-3 Medium and its potential in growing and yielding rice (*Oryza sativa*).

This is a quasi-experimental study. No control group was set up. It was conducted from June 12 to September 17, 2019, in San Miguel, Puerto Princesa City.

An S-3 medium was developed using ratio and proportion of sand, sawdust, and soil. The 1:4:1 ratio was used as medium. This was treated with water by soaking for 24 hours. Three hundred RC-356 varieties of rice seeds were used, soaked, and pricked. Two hundred sixty-two germinated and fifty were transplanted. There were ten pots used and each pot had three seedlings and was seen for ninety days.

The medium manifested pH of 6.41, moisture content of 38.40% and water holding capacity of 71.90%. The presence of macronutrients and micronutrients were in trace amount. The particle density and porosity of the medium seem to have contributed to plant growth. The heights of the plants were measured 90 days after it was transplanted, and the recorded average height was 63.68 cm. In terms of yield, 80% of is a suitable alternative medium to soil and suitable medium in planting of rice.

From the results, it is recommended that the S-3 media be tested in other plants and be applied to a larger area. Complete soil analysis should be done, and different varieties of rice and other seeds could be used and tested in the medium.

Keywords: S-3 medium, *Oryza sativa*, sand, sawdust, soil

SOW-Hy Tri-Cycle

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The Solar-Wind Hybrid Tricycle (SOW-Hy) were conceptualized by the researchers to create a modified and innovative technological resource that enhances the awareness of using renewable energy through transport vehicles. This study is to design, construct, and test the effectiveness of the Solar-Wind Hybrid Tricycle with on-vehicle charging systems to charge the bank of batteries, not by a 220 Volts Alternating Current but with a solar charger, wind charger, and a pedal permanent magnet generator. Evaluation includes, technical capability, environmental benefits, economic, political, and social benefits of the end-users. The special features include a charging system combined with solar, wind and foot pedal-driven permanent magnet to power-up with an off-grid renewable system that do not rely on the imported supply of petroleum products. This research used descriptive and developmental research types with survey questionnaires, documentary analysis, and interviews as the primary data gathering tools. five experts in automotive technological school in the province, 5 environmentalists, and 10 tricycle drivers in Virac, Catanduanes with a total of 20 respondents validated the study. Data gathered were quantified and analyzed with the use of a weighted mean. As a result, the SOW-Hy can be designed and constructed in different model and power rating of Electric Tri-cycle. As it can run and carry a passenger with the help of renewable energy, the environmental pollution could be minimized, and the sharp curb of greenhouse gas emissions can be lessened. It can be utilized in empowering communities and transforming lives through knowledge and technology transfer by way of training, workshop, seminars and technical advisories which significantly impacts the socio-economic lives of every Catandungenos. The Solar-Wind Hybrid Electric Tricycle was constructed successfully and is very highly accepted by the expert validators and respondents who evaluated it.

Keywords: renewable energy, DC electrical energy, axial flux permanent magnet

Road Traffic Data: A Criteria for Location Analysis of Road Power Generation

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The transport sector of the Philippines goes along the fast phase development of technology. With the rigorous promotion of the modernization programs to conventional tricycles and replacing them with electrical versions (E-trikes), the electric consumption crisis looms in. This paper attempts to show how energy can be tapped and used to generate electricity by the concept of Road Power Generation. A Speed Bump Generator using Flip Plate Lever Mechanism collects and converts kinetic energy to electric energy which is then stored in a DC battery. However, its ability to generate energy depends primarily on the frequency of the passing vehicle, therefore choosing the best location is equally important. This paper presents how to identify the suitable and efficient location of the Speed Bump Generator using Road Traffic Data. Three possible stations are analyzed based on Traffic Volume. The vehicles passing were categorized based on weights. Conversion of the vehicle flow into electricity is illustrated to show which station provides sufficient energy for E-trike charging per day.

Keywords: Charging Station, E-trike, Location Analysis, Road Power Generation, Speed Bump

The Assessment of The Pre-Board Review in Civil Engineering in Relation to the Licensure Examination: A Triangulation of Inputs for Curriculum Enhancements

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In line with the vision and mission of the university, consistency of the students' performance during and after their studies was observed. Relationship between examinees' performance in CE Pre-Board Exam (PBE) and their Civil Engineering Licensure Examination (CELE) was determined if significant, as an input enhancement in the current program curriculum. Study used mixed design method which divided into three phases. Phase 1, data analysis from the academic records from the University Registrar and Board Ratings from PRC showed, from 2014 - 2018, PBE and CELE ratings are positively correlated, higher rating in PBE - higher chance of passing the CELE. Challenge to both Students and Faculty to improve the processes and passing rate of the PBE, furthermore improved the University's performance in CELE. Phase 2, general views of PBE as a course were determined from the graduates through the 124 CELE first takers respondents. Respondent's readiness level for CELE is highly associated on how oriented, guided, and prepared in their PBE. Review materials, lecturer subject mastery, program, venue, respondent's attendance and experience in the PBE are significant in the CELE. PBE affected greatly the study habit of students in their first CELE. Phase 3, conducted survey from faculty who administers the PBE, observed the moderate extent of the positive effects of the Pre-Board review procedure to student's performance in the PBE likewise in CELE. Study shows the percentage linear increase of the correlation of PBE and CELE passing rate, PBE inclusion as perceived by alumni and faculty in the BSCE curriculum is significantly effective in the passing rate of the first-time takers of CELE.

Keywords: Pre-Board Review, Licensure Examination and Curriculum Enhancements

Pros and Cons of Teachers in Teaching Science Using Mother Tongue: Descriptive Study

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This study aimed to determine the status and problems of Grade 3 science teachers in teaching using mother tongue in a new normal setting. Specifically, the study focused on the variables in terms of (a) curriculum content, (b) instructional or teaching strategies, and (c) physical facilities and equipment. The questionnaire underwent content validation and was administered to 39 teacher-respondents in 38 schools in Tagbina, Surigao del Sur. Purposive sampling method was used in this study. Furthermore, thematic data analysis was used in this study, which utilized individual responses to their coping strategies in teaching experiences toward their problems. Finally, the data was collated and analyzed. The findings revealed a moderate problem with the experience of the Grade 3 teacher respondents, particularly with the physical facility and equipment. However, most of the teachers' strategies for coping with such common problems in teaching science using mother tongue in the new normal setting included conducting home visits, creating online communication like group chats, phone calls, and texts, and other teaching interventions and initiatives for delivering instructions amidst the pandemic. It is then recommended that the continuous support of the school administrators and others who benefited from this study be an integral part of promoting the mother tongue in teaching science, along with the use of educational technologies in the new normal setting of classes.

Keywords: new normal; MTB-MLE; teaching science; distance learning; Tagbina

Upshots of Modular Distance Learning on the Academic Achievement of Grade-12 Students in Physical Science

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The educational system of the Philippines is currently acclimating to the “new normal setting of education where alternative modalities has been introduced due to the threats of the COVID-19 pandemic. Thus, this study aims to determine the upshots of modular distance learning on the academic achievement of Grade 12 students in physical science by using the mixed- method design. The researchers conducted a pretest and a posttest in physical science among Grade 12 students of Bingcongan Integrated School through the house-to-house distribution of test questionnaires. In addition, both teacher and students underwent house-to-house interviews and observations while adhering to the IATF’s health regulations. The 25 participants were identified through a universal sampling procedure. Paired T-test was used to examine the data and thematic analysis for qualitative information. It was found that there was no significant difference between physical science pretest and post-test scores of Grade 12 students. This suggested that students performed similarly in both pretest and posttest. Various challenges were identified by both teachers and students. Coping mechanisms were also recognized as their means to adapt with those challenges experienced. Thus, the outcome of this research will serve as basis for improving the implementation of modular distance learning to ensure student learning.

Keywords: challenges, coping mechanism, mixed method approach, modular distance learning approach, new normal education

Attitude of Fourth-Year Pre-Service Teachers Towards the Teaching Profession

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One of the characteristics that a teacher should possess to acquire deeper professional competence is a positive attitude towards teaching. A teacher's attitude defines the course of action that the pre-service teacher would employ in her teaching practice. Hence, the purpose of this study is to investigate the institution's-BEED and BSED fourth-year pre-service teachers' attitudes towards the teaching profession. A descriptive survey method was used to accurately describe the data from the 100 participants selected using a purposive sampling technique. The study findings revealed that the fourth-year pre-service teachers have a positive attitude towards the teaching profession. However, the results showed no significant difference in the pre service teachers' attitudes in relation to age, gender, course, and economic status. This result implies that the favorable attitude of pre-service teachers towards the teaching profession would generate professionalism and competence in their future teaching practice. Thus, the enhancement of the curriculum, educational policies, experiential learning, and the school's management system was recommended to sustain and develop the pre-service teachers' positive attitude towards the teaching profession.

Keywords: attitude, teaching profession, pre-service teachers, North Eastern Mindanao State University (NEMSU), Philippines



ONLINE PRESENTATION

Infrared Thermal Analysis Model for Detecting and Correcting Unbalanced Electrical Loads

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The applications of IR Thermography in Electrical Engineering have been gaining popularity. The study aimed to establish thermography as an aid to detect unbalances in the power systems as well as provide a tool for the analysis of these systems. It focused on constructing a physical model of a 220 V 3-phase 3-wire system, after which, temperature measurements were obtained with varying electrical loads connected to the model. Then, the values were compared against NETA/NFPA standards, and lastly, a simple application was developed for the evaluation of measured values. Based on the data, there is a positive nonlinear relationship between current and temperature but deeper study of what type of trendline the two follows. After following the suggested actions from the data run, the tool was found to be a viable aid for correcting the imbalance in the system. The researchers recommend the improvement of the software for higher voltages with addition of more complex loads and consideration of systems with a neutral line as well.

Cases of Women Deprived of Liberty in the City of Tarlac

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This study aimed to explore the lives of women deprived of liberty at Tarlac City Jail Female-Dormitory. The objective of the study is to analyzed the present situation of inmates in terms of their profile, to narrate the life stories of women deprived of liberty to enhance the strategies they implemented in order to improve the welfare and development programs as this will assist them in adjusting to life inside the prison and reintegrating into the community outside the prison.

Based on the research, the findings of the study were women deprived of liberty are drug offenders that the majority of them were influenced by their friends, those who committed a crime for the reason of family needed to finance their children or parents' needs. Shared positive and negative experiences in their life outside and inside the jail. Moreover, the challenges faced in the implementation of reformation programs for persons deprived of liberty were limited to the budget not sufficient enough to provide good and better services which lead to poor performance of the programs.

Even so, cases suggested to further improve services from Bureau of Jail Management and Penology and to seek services providers. As per cases' experiences, mostly suggested some programs that need to be strengthened when it comes to providing learning opportunities for Persons Deprived of Liberty, Lastly, to develop and help the newly release PDL's in outside world to be cover up by the aftercare program of the Bureau.

Research on the Action Plan for the Development of Emergency Volunteer Service- Taking Guangxi Province of China as an Example

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Sudden and malignant events have seriously affected the health and stability of the country and society. Due to the uncontrollable characteristics of emergencies, the government's ability to respond is not strong. It can be said that the occurrence of emergencies is a test of the government's emergency response capabilities. Voluntary organizations have the function of integrating social resources and solving unexpected problems in design, and are effective responses to serious emergencies. During the COVID-19 epidemic, people from all walks of life went to the front lines to serve as emergency volunteers in this major public security incident, and played a positive role in sharing the government's worries and helping the people. This study takes China's Guangxi Province as an example to explore the process of social governance in this province and the realization of comprehensive social stability and harmony. The government is faced with the challenges of public security incidents, health incidents, disaster incidents, etc. The government's emergency management work is relatively heavy and stressful, which requires the use of social forces in emergency management to help the government share the pressure. At this time, the government should also actively make adjustments, change the status quo of a single response subject, and give full play to the role of social voluntary organizations in emergency management, so as to form a combination of government and social forces and improve the government's emergency management capabilities.

This study finds the problems and causes of emergency volunteer service in Guangxi Province through analysis, and proposes action plans: such as improving emergency legal norms, building overall coordination mechanisms, establishing a stable volunteer team, improving fund raising and investment mechanisms, and formulating diversified skills training system, etc. This study aims to provide reference for the construction of emergency volunteer service systems in other regions at home and abroad.

Profile and Job Burnout Symptoms Among Chinese University Educators: Towards a Proposed Action Plan

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This study describes the job burnout of College Teachers in China and correlates the symptoms of job burnout with their population structure. The study also identified job burnout symptoms, mainly core and secondary symptoms. It also gave an action plan on reducing college teachers' job burnout. This study put forward some suggestions for promoting the management education of college teachers. Finally, the Enlightenment of this study to college teacher education and education management is obtained.

Based on the findings of the study, the following conclusions were formulated:

1) Majority of the teachers work for six to ten hours per week; 2)The bulk of teachers have five or more teaching preparations with 62.26% of the entire population.; 3) Respondents were able to enjoy and benefit from the following: endowment insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance, and housing provident fund.; 4) Coaching is placed as the most usual assignment; 5) Issues on technical facilities, lounge spaces and classroom interior were least of their concerns; 6)The majority of them complain about working beyond official time; 7) The results show that the participants struggle to find enthusiasm for their work; 8) Majority of the teachers suffer muscle pain due to their field of work; 9) The number of teaching hours, benefits, and other assignments have significant negative correlation with the demographic profile; 10) The immediate effects that are manifestations of job burnout are fatigue and excessive stress . In addition, the researcher recommends the following:

1) Directly address teacher burnout with seminars, classes, and resources on stress management. Emphasize the importance of maintaining a healthy work-life balance; 2) Encourage teachers to foster relationships with one another. When possible, schedule common planning periods for teachers who teach the same course and year level; 3) Foster a positive climate by creating opportunities for fun. Host optional faculty get-togethers and meals.

Characteristics and Achievement of Top Performing Students of Guilin Institute of Aerospace Technology: An Analysis

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This qualitative descriptive case study explored the characteristics, challenges and coping strategies of top performing students in their academic life in Guilin University of Aerospace Technology.

The subjects in this study were limited to fifteen (15) selected top performing students of Guilin University of Aerospace Technology (GUAT) who are beneficiaries of scholarship programs and are academically successful.

Based on the findings, participants were 19 to 26 years old. Five of the participants were male while ten were female. Most of the participants were in the second-year level. Two of the participants were taking up Mechanical and Electronic Engineering while 2 were taking up Logistics Management; 2 were taking up Software Engineering. Moreover, one student enrolled in each of the following courses Mechanical Design and Manufacturing, Animation Production Technology, Aircraft Manufacturing Engineering, International Business, Mechatronic Engineering, Building Environment and Energy Application Engineering, Energy and Power Engineering and Automation. The parents of majority of the participants just completed the primary level of education and most of the were earning 2000 RMB. Most of them were into farming and construction. They also have a big family and most of the participants were the eldest child.

Most of the participants has a strong sense of responsibility and initiative. They were introverted, have some low self-esteem, have good communication skills, and have average interpersonal relationships. They are also outgoing, cheerful, and has good interpersonal relationships and optimistic attitude towards life. All of the participants were members of the Faculty Student Council and were into sports.

Based on the findings all the participants had difficulty adapting to the environment in the university. Moreover, they all encountered challenges because of their family's economic situation. To cope with the difficulties, they encountered, all of the participants strive to obtain a scholarship each semester by working hard, avoiding other distractions and temptations, asks for additional assistance and support from teachers and peers for the challenging subjects, combines this with continual practice and research. The also practice appropriate study habits, such as attentively listening to the teacher in class, summarizing and reviewing the material promptly after class, and completing pertinent practice tasks with attention

Future academics should do comparable analyses about government support for high-achieving kids. The results will serve as a springboard for developing initiatives to support students, particularly those with the best performance.

Job Satisfaction and Job Burnout of Teachers in Selected Medical Colleges in Southeast China

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This study describes the job satisfaction and job burnout of teachers in some medical colleges and universities in southeast China and determines the status quo of their job satisfaction and job burnout. This study makes some suggestions for improving job satisfaction and reducing job burnout.

According to the research results, the following conclusions are drawn:

1) The job satisfaction of teachers in medical colleges and universities is average. They in the Policy, the Tasks the assignment and implementation, Management, supervision, Remuneration/Compensation/incentives, Working environment. Sense of achievement and social status, Professional Development and Training and other dimensions of satisfaction are average; The only dimension of relative satisfaction is interpersonal relationships; 2) The level of job burnout of teachers in medical colleges and universities is average, and their job burnout in such dimensions as Communication pressure, Depersonalization and Low sense of achievement is not high. But severe burnout in the Physical/mental exhaustion dimension;

In addition, the researchers suggest the following: 1) establish a fair and reasonable compensation incentive system; 2) Improve the evaluation standards of medical college teachers; 3) Make career plans; 4) Pay more attention to young teachers.

Teacher Incentive Program in Rural China: Towards a Plan of Action

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With the continuous development of economy and society, education has been paid more and more attention. In view of the incentive problem of primary school teachers in rural and remote areas, a series of policies have been issued, which have improved the enthusiasm of rural primary school teachers, but new contradictions have gradually emerged. For example, the material needs of rural primary school teachers, the income gap between urban and rural areas, the reduced attention to rural primary school teachers, and the loss of excellent teachers and students. Therefore, the research and discussion of this topic has certain theoretical and practical significance.

In this paper, the final data will be analyzed and discussed through literature survey, combined with the questionnaire and interview of all primary school teachers in Shuangyi. In order to get the problems and solutions of rural primary school teachers' motivation at a certain level. This paper discusses the two factor theory, Maslow's hierarchy of needs theory, etc., and makes a preliminary study on the evaluation of the incentive policy for rural primary school teachers in the study area, the extent of the implementation of the incentive policy, the challenges encountered, and the solutions to the problems. It is found that teachers are basically satisfied with the current incentive policy, and there are still some deficiencies in salary, democratic management, infrastructure conditions, etc. The degree of satisfaction with the implementation of the incentive policy is not very high. The incentive policy is very good, but there are problems in the implementation process, resulting in the low implementation of the incentive policy. The main challenges are insufficient infrastructure construction, insufficient salary to meet the needs of life, limited career development, poor democratic management, and inability to accompany more family members because of the long distance.

According to the problems obtained, after analysis, the corresponding plans are proposed mainly from the aspects of the implementation of incentive policies, increasing salaries, increasing allowances for working primary school teachers in remote areas, strengthening teacher training, optimizing career planning channels, etc., so as to improve the work enthusiasm of rural primary school teachers and improve teaching quality.

Keywords: rural primary school teachers; excitation; Evaluation and analysis; Optimize incentives

Competency of the Graduates of the TESDA Trainers Methodology 1: Basis for an Action Plan

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This study focused on the competencies of graduates of the Trainers' Methodology 1 of Technical Education Skills Development Authority – Provincial Training Center of Abra. The population of the study composed of one administrator, 11 trainers and 326 Trainers Methodology 1 graduates who are assessed competent and have received their training competency certificates for calendar year 2019-2020. The trainer respondents are currently employed in the Provincial Training Center - Technical Vocational Strand of the Province of Abra. The study employed the quantitative descriptive-correlational design.

This study looked into the significant relationship between the profile and the level of competency of trainers of Technical Education Skills Development Authority – Provincial Training Center. It also investigated the significant relationship between the level of competency of trainers in the Trainers Methodology I and the students taught.

The study used a structured questionnaire based on the Trainers Methodology 1 Training Regulation of TESDA and was distributed to the respondents such as administrator, peer and students.

Results showed that almost all of the respondents are male, ranges of 31-40 years old, married, College graduate, have a driving skill, contractual, five years and below years of service, below 20,000 salary per month, participated trainings and seminars in line with the respondent's profession and received only one certificate.

Moreover, the level of competency of the trainers of TESDA Provincial Training Center by the three groups of respondents along: plan training session; facilitate learning session; supervise work-based learning; conduct competency of assessment, maintain training facilities, and utilize electronic media in facilitating learning. As a whole, it was rated Very Satisfactory on the indicators such as "Supervise Work-Based Learning" by the administrator ; "Conduct competency assessment" by the peer. The group of students rated "Outstanding" on the indicators like "Conduct competency assessment"; "Maintain training facilities"; and "Utilize Electronic Media in Facilitating learning".

Furthermore, it was significant levels along "conduct competency assessment" and "maintain training facilities". As to other skill, it was revealed that highly significant along "facilitate learning session" and "conduct competency assessment while significant along "plan training session"; "supervise work-based learning"; "maintain training facilities".

Finally, the Action Plan and Policy Recommendation can considerably help improve the Trainer's Methodology I course offering of the Technical Educational Vocational Skills Development Authority (TESDA) which aimed to develop the knowledge and skills of a Technical Vocational Education Trainer.

Cassava (*Manihot esculenta*) and Coffee (*Coffea canephora*) Pulp as Feed Inclusion for Post Weaning Native Pigs

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The response of cassava, coffee pulp, and trichantera leaves was evaluated. Sixteen (16) post-weaning native pigs were used to investigate the growth performance, feed consumption, and conversion ratio, and fecal observation as inclusion for the ration at pure commercial feeds, 50% rice bran and commercial feeds, rice bran, fresh trichantera leaves, and 18% cassava pulp and lastly, rice bran, fresh trichantera leaves and 18% coffee pulp. Every second week 16 pigs were weighed, and daily feed intake was recorded daily. Correlation of body weight, feed consumption, and feed conversion ratio of native indicates at 18% inclusion of coffee pulp had the antagonistic effects on pig growth can be avoided through upper feeding limits /using substances that make them palatable and nutritious. Hence a combined use of rice bran, fresh trichantera leaves, and coffee pulp can reduce the feed cost for small-scale farmers where these crop-by products are available in a large amount.

Keywords: Native pigs, Coffee pulp, Cassava pulp, growth, *Trichantera gigantea*

A Toastmaster's Contention: From Strategies to Impact

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Society reflects the organizations that it has. Hence for a community to be better, one must examine the organizations, people, clashes, and activities that envelop it. To compile diverse strategies showcased in a Toastmasters Club's speeches during face-to-face and online platforms meetings and to share the learning therein with the community, the paper documents speech themes during the organization's meetings. These themes span quotations, thought-provoking statements, and controversial topics which permeated delivered speeches. Exhibited strategies such as novel ideas, skills borne out of the experience, and daring engagements were discussed, interpreted, and analyzed in the qualitative paper through an immersive and critical thematic inquiry that utilized primary data strategies while seeking communications insights from purposively chosen and diverse informants and gathered data from a local Toastmasters club. Deeper research on calibrating persuasion in public speaking and on the implicatures of surfaced strategies to social relationships may be further ventured out based on the insights and learning presented here.

Keywords: toastmasters, table topics, icebreaker's speech, prepared speech, master

Employment of the Master of Arts in Mathematics Education Graduates of a University in Northern Philippines

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Tracer study comprises one form of pragmatic study which offers valuable information for evaluating the results of the education in a specific institution of higher education. Similarly, it enables the institution of higher education to get information on possible insufficiencies in a given educational program which can serve as a basis for curricular enhancement. This study aimed to trace the 2015 to 2019 MAME graduates in the College of Teacher Education for Graduate Studies of the University of Northern Philippines in terms of their personal profile, their work-related profile before taking up a master's degree and after graduation, their reasons of taking up the MAME program, their perceived competency level before and after taking the program, their appraisal of the most useful courses offered in the program, their evaluation on the contribution of the program to their personal and professional growth and their assessment on the features of the program and suggestions of how to improve the program. The study utilized mixed method of research in order to attain the objectives of the tracer study. The subjects were the MAME graduates from 2015 to 2019 and a survey questionnaire and open ended questions were sent to them thru various online flat forms. Based on the findings of the study, the following conclusions are derived: pursuing graduate studies chooses no sex, civil status nor age as long as there is a will to improve one's self; students who took the MAME program have math- related educational background and finished the program within the prescribed number of years; having master's degree could contribute greatly in landing a permanent teaching job in public schools; professional and personal growth and development is the strongest drive to pursue advance education; the MAME program offers subjects that are useful which enhanced the teaching competencies of the graduates and consequently contribute to the holistic development of the graduates; and that there are areas needing improvement in the MAME program.

Occupational Stress Effects on Employees' Work Performance in the Bangsamoro Autonomous Region in Muslim Mindanao Offices

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The study aimed to determine the occupational stress of employees in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) and its effects on their work performance. Occupational stress is measured regarding resources, individual skills and abilities, reward systems, and work demands. In contrast, work performance is based on productivity, job satisfaction, organizational loyalty, and positive attitudes. The study used descriptive correlation utilizing a survey questionnaire as a tool. The study's respondents were the 136 selected employees from the BARMM. Data revealed that most employees face occupational stress, and it is inevitable that the workforce's productivity is the most crucial factor as far as the success of an organization is concerned. Productivity, in turn, is dependent on the satisfaction of the employees. The innovative behavior of employees is also essential, especially in service organizations. Hence, there was no statistically significant relationship between employee occupational stress and effects on work performance in the Bangsamoro Autonomous Region in Muslim Mindanao, and the null hypothesis is accepted.

Private Sector Participation in Ecological Solid Waste Management in South-Central Mindanao, Philippines

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The study aimed to determine the private sector's participation in ecological solid waste management in terms of mandatory segregation at the Source, collection, and transportation of solid wastes, recycling program, and waste management facilities and its attainment of objectives in terms of ensuring the protection of public health and environment, utilizing environmentally-sound methods that maximize the utilization of valuable resources, encouraging resource conservation and recovery, ensuring proper segregation, collection, transportation, storage, treatment, and disposal of solid waste, and encouraging greater private sector participation in solid waste management. The study used descriptive–correlation design utilizing a survey questionnaire. The study's respondents were groups of NGOs, recycling industries, and manufacturing in South Central Mindanao, Philippines. The result shows a significant relationship between the participation of the private sector in the Areas of the Bangsamoro Autonomous Region in Muslim Mindanao and the attainment of objectives in implementing ecological solid waste management. Hence, the null hypothesis is rejected.

Use Of Online Social Networks and Work Productivity among Employees of Ministries in Bangsamoro Autonomous Region in Muslim Mindanao

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The study aimed to determine the use of social media in terms of information seeking and relationship building and maintenance, and work productivity using social media in terms of work motivation and quality of work of employees in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). The study used a descriptive–correlation design utilizing a survey questionnaire. The study’s respondents were 100 employees from various units under the BARMM Offices. After gathering the data, the result shows a correlation between the use of social media and the work productivity of the employees of the different offices and ministries of BARMM. After gathering the data, the findings show significantly has a positive effect on the extent of the use of social media in work productivity in seeking information, building relationship and maintenance, work motivation, and quality of work. Hence, the null hypothesis is rejected.

Comparing Reading Skills of Conventionally-Schooled and Homeschooled Children

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Reading is part of our everyday life. Children enhance their reading skills through the help of different teaching reading strategies. There are different reading skills that are vital to children's development because reading skills are essential for one to function in our society. Nevertheless, the variety of teaching reading strategies goes with the variety of learning methodologies and the different formal education systems that may entail. This led to the conduct of this study on comparing the reading skills of conventionally-schooled and homeschooled children. In the study, an adopted questionnaire for teachers and homeschooling parents as well as different reading worksheets for kindergarten, grades 1, 2, and 3 that is sourced from various sources were administered using convenience sampling. Mixed method of research was the study's research design. Research respondents were homeschooling parents and conventional school teachers as well as select homeschooled and conventionally-schooled pupils who belong to the following grade levels: kinder, grade one (1), and grade two (2). The gathered data underwent statistical analysis -- percentage frequency, median, Mann-Whitney U - test of difference and z-score. Results revealed that homeschooled children are significantly more skilled in reading than from conventionally-schooled children. Furthermore, the data gathered revealed that there are different teaching reading strategies used to improve the reading skills of conventionally- schooled and homeschooled children such as phonics instruction and read aloud, which belongs to the bottom up process in reading as well as the use of schema which belongs to the top-down process in reading. Additionally, there are different learning styles in reading that are used to improve children's reading skills -- visual, auditory and tactile-kinesthetic. This study is beneficial to the educational system more particularly in the Philippines, the research locale, where homeschooling is uncommon. It further strengthens the recent decision of the Philippine Department of Education to decree homeschooling as one of the alternative delivery modes of the formal education system of the country.

Keywords: homeschooling, reading, teaching reading, teaching reading strategies

Challenges and Adjustments of BEED Students in their Practice Teaching amidst the COVID-19 Pandemic

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During the COVID-19 outbreak, the education system throughout the world was affected. Consequently, several schools, colleges, and universities were forced to switch to distance learning to manage the spreading of Coronavirus and mitigate its impact. The outbreak brought tremendous impact resulting in rapid changes in education. Students at all levels specifically, the BEED students who are engaging in practice teaching are now experiencing difficulties switching to the new learning classroom modality. The researchers seek to find the solution for this study to aim at investigating the real context of practice teaching as experienced by the BEED student teachers. This study further attempted to highlight the challenges that the BEED student teachers face while on practice teaching. The participants of the study are five (5) BEED students. The study is descriptive qualitative and used phenomenology. Data were gathered through Google forms. Data have shown challenges among the participants, difficulty in adjusting to the situation, and low acquisition of learning and training.

Keywords: Challenges, Practice teaching, COVID-19 Pandemic, distance learning

Teacher Education Community Extension Services of State Universities and Colleges In Region III: An Evaluation

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This study assessed the Teacher Education community extension services of the State Universities and Colleges in Region III. Data was collected through a survey, and descriptive statistics were used for analysis. A purposeful sampling methodology was used to achieve the study's objectives.

Based on the findings, the following conclusions were drawn: the objectives, service provided, human resources, budget, facilities, monitoring, and evaluation of the extension services of the Teacher Education showed that all items were rated strongly agree, the clients' and implementers' perception of the level of implementation of the extension programs in terms of process and outcome were rated very satisfactory, one of the problems encountered by the clients that the clientele is not interested in using the extension services, , one of the problems encountered by the implementers that the faculty extentionists lack of interest was caused by their heavy schedule Before signing a contract or beginning a project, community leaders should be well coordinated and informed about the initiatives as recommended by clients, deciding on an appropriate timetable for each week's extension day that will address the extended activities for all faculty extensionists, per the implementers' recommendations, and the findings of this study will serve as the basis for developing standards for the qualifications of industrial education teachers.

Adaptability Response to the New Normal of Employees in Batangas State University - Lipa Campus

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The pandemic of COVID-19 has numerous implications especially on education. Due to the rapid closure of institutions and schools, teachers and students were compelled to adapt to remote education. Employees and faculty in Batangas State University-Lipa Campus undergo some major changes. From face-to-face education to online learning, this transition may affect their flexibility in work. As a result, the researchers conducted this study to determine the profile of the respondents and its relationship to the adaptability response of employees to new normal set up with regards to Cognitive Flexibility, Emotional Flexibility and Dispositional Flexibility.

The descriptive method of research was adapted through the use of a researcher – made questionnaire complemented by interviews. Respondents were 100 employees and faculty of Batangas State University Lipa Campus willingly responded to the survey questionnaire. Weighted mean, frequency, percentage and t –test was utilized as statistical tools to treat gathered data.

The findings revealed that most of the respondents were employees and faculty aging from 25-40 years old, mostly females and single. They are college graduates whose length of working experience is 1-5 years. Most of them were instructors 1-3 with an employment status of guest lecturer. Meanwhile, the cognitive, emotional, and dispositional flexibility show a fine result of adaptable level. The level of adaptability response to the new normal set-up shows no significant difference on the profile of respondents in terms of the sex, civil status, highest educational attainment, length of working experience, position, and employment status . However, as the age differs, it significantly affects the assessed level of adaptability response to the new normal set-up among employees and faculty. After a comprehensive analysis of the findings, the researchers presented a plan to enhance the employees' and faculty's adaptability to new normal set-up.

Keywords: Adaptability, Cognitive Flexibility, Dispositional Flexibility, Emotional Flexibility, New Normal

Satisfaction and Effectiveness on Hybrid Learning in Zamboanga Peninsula Polytechnic State University (ZPPSU)

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Synchronous lessons are delivered both offline and online in hybrid learning. It is a kind of blended learning that is primarily concerned with connecting the real-world classroom and online learning environments for a more comprehensive education. This complies with the most recent recommendations for using face-to-face instruction to prevent and reduce COVID-19 infections in higher education, known as CMO No. 09, s. 2022. Hence, ZPPSU adheres to the limited face-to-face classes in-campus on any given day based on the cyclical student shifting/rotating schedule with a combination of online learning.

The focus of the study was to determine the level of satisfaction and effectiveness of Hybrid learning among second year college students of Zamboanga Peninsula Polytechnic State University. Also, this study determined if there is a significant difference between students' satisfaction and effectiveness of Hybrid learning. Thus, stressing towards the improvement in the delivery of instructions.

Data were collected from second year college of the different colleges of Zamboanga Peninsula Polytechnic State University using proportional sampling method using survey questionnaires.

The results indicate that some of the student characteristics or their demographic profile are significant predictors for student learning outcomes in hybrid learning. The feedback of students who are amongst the key stake holders is essential to ensure a successful implementation of hybrid learning. Furthermore, the impacts of these findings were discussed and relevant suggestions were given for future researchers.

Keywords: Hybrid Learning, Satisfaction, Effectiveness, Education

Pag-Unlad At Pagbabagong Propesyunal ng mga Nagsipagtapos sa MAED Filipino: Isang Pangangalap

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Ang pag-aaral ay may layuning mailarawan at matuklasan ang kalagayan ng mga nagsipagtapos sa MAED-FILIPINO ng Paaralang Gradwado, Kolehiyo ng Panggurong Edukasyon ng Tarlac State University mula sa mga taong panuruan 2013 hanggang 2021. Ang pag-aaral ay may disenyong deskriptibo at ginamitan ng makabagong sistema ng teknolohiya sa pangangalap ng datos. Umikot ang pag-aaral batay sa pagbabagong propesyunal: (1) tagal ng taon sa serbisyo; (2) kasalukuyang posisyon; (3) karagdagang trabaho bilang guro; at kasalukuyang sahod na tinatamo. Gayundin sinikap ng pag-aaral na masuri ang kanilang treyning sa pamamagitan ng kanilang kakayahan sa pagtuturo, kasanayang pangwika, kasanayan sa paglutas ng suliranin, at kasanayan sa pagbuo ng pananaliksik. Sinuri rin ang naging pagpapahalaga ng mga ito sa reponsibilidad, katapatan, panahon/oras, at kakayahan. Kasama rin sa layunin ng pag-aaral ang paglalarawan ng kanilang kasalukuyang katayuan sa buhay mula sa kanilang buwanang kita, ranggo, kalagayang panlipunan at ang paglalarawan na rin ng kanilang mga naiambag sa institusyon bilang mga alumni matapos makapagtapos ng digring masteral sa Kolehiyo ng Panggurong Edukasyon. Sa kabuuan may pitumpu't dalawang (72) tagasagot sa pag-aaral na natapos simula taong panuruan 2013 – 2021. Ang mga ito ay pinili ayon sa pamamaraang *purposive sampling* teknik. Nagsagawa rin ng panayam sa pamamamagitan ng *fb messenger*, *instagram*, *cellular phones* dahil na rin sa kalagayang pandemya na kinahaharap sa kasalukuyan. Dumaan sa *Research Ethics Committee* ang ginamit na talatanungan upang maipakita ang iba pang mga perspektibang makatutulong nang higit sa pag-aaral.

Nakapagtala ang pag-aaral na ang karamihan sa mga nagsipagtapos ay nakaabot sa ranggong Teacher 3 at nabigyan ng halos karagdagang gampanin maliban sa pagtuturo. Ang ilan sa mga ito ay pagiging koordineytor, tagapagmasid, tagapayo ng mga papel pangkampus, Head ng deapartamento, at naging *radio broadcaster* na siyang pinakabagong gampanin na sumubok nang labis sa kanilang kakayahan dahil na rin sa panibagong *platform* sa pag-abot ng *mode of teaching* sa kasalukuyan. May mga naging tagapagsalita sa internasyonal nasyonal at rehiyonal na mga komperensiya at nakapaglathala ng kanilang mga tesis sa mga pang-internasyonal na publikasyon.

Nagpakita rin ng positibo at mataas na mean ang mga pagbabagong naganap sa kanilang buhay sa pamamagitan ng paglalarawan sa kanilang mga treyning, kasalukuyang katayuan sa buhay at pagpapahalaga maging sa naitulong na nila bilang alumnus ng unibersidad matapos makuha ang kurso sa MAED Fil. Karamihan sa mga panukatan ng pag-aaral ay may resultang lubos na pagsang-ayaon na ang tanging ibig sabihin lamang ay tunay ngang may magandang pagbabago at pag-unlad na naganap sa buhay ng mga guro matapos tahakin at lunduin ang mundo ng pag-aaral sa mas mataas na lebel ng pagkatuto.

Ang pagtukoy sa pag-unlad at pagbabagong pampropesyunal ng mga nagsipagtapos sa MAED FIL ay isa sa mga salalayan upang maipakita na ang programa ay kailangang magpatuloy pa sapagkat maraming mga guro na nagtuturo sa Filipino ang nabibigyan ng magandang kalagayan sa usaping akademiko at posisyon sa paghahanap-buhay. Isa rin itong paraan upang magbukas ng magandang oportunidad sa mga guro at upang malinang nang higit ang kanilang kasanayan sa pagtuturo. Halos karamihan pa sa mga ito ang nagbabalak na kumuha ng digring doktoral na sa malaot-madali kung makasasapat at makapaghahanda ng mga pampinansiyal na gastusin. Sa katunayan lima sa mga ito ay nagtapos na ng Doktor sa Pilosopiya sa Filipino sa De La Salle University, Lyceum University at Colegio De Dagupan.

Keywords: pag-unlad at pagbabagong propesyunal, pangangalap

Wikatura: Elektronikong Modyul sa Ugnayang ng Wika, Kultura at Lipunan para sa Kolehiyo

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Ang pag-aaral na ito ay tungkol sa pagbuo ng e-modyul kagamitang magagamit ng mag-aaral sa paglinang ng kanilang kaalaman at kasanayan tungo sa malalim na pang-unawa sa wika at kultura. Naging sentro ng e-modyul ang mga paksa sa kurikulum ng FIL. 106 Ugnayan ng Wika, Kultura at Lipunan at ang kahalagahan ng e-modyul sa mga mag-aaral at guro.

Gumamit ng disenyong pinaunlad na pananaliksik (R&D) at palarawang pananaliksik (Descriptive Research). Gayundin ang modelong ADDIE na naging batayan sa prosesong ng pagsasagawa ng pag-aaral. Pinabalido ito sa limang (5) ekspertong guro at isang eksperto sa computer (I.T.) ng Tarlac State University upang matukoy ang kalidad ng nabuong e-modyul. Ang mga bahagi ng panukatang nakapaloob sa tseklis ay ang mga sumusunod: (1) Nilalaman, (2) Pagsubok at pagsasanay, (3) Organisasyon at presentasyon, at (4) Interaksyunal na Disenyo at suporta. Purposive sampling naman ang paraan na ginamit sa pagpili ng mag-aaral na kalahok mula sa ikalawang antas ng Kolehiyo ng Pangggurong Edukasyon upang matukoy ang antas ng pagtanggap sa nabuong e-modyul.

Batay sa mga resulta, nakabuo ng isang e-modyul na pinamagatang WIKATURA:Ugnayan ng wika, kultura at lipunan para sa Kolehiyo. Katobee author application ang ginamit sa pagbuo ng e-modyul ang magandang aplikasyon na gamitin sa pagtuturo online at face-to-face, para makatugon sa nararanasang hamon sa edukasyon sa kasalukuyan. Batay sa kinahitnan ng balidasyon ng mga eksperto ukol sa binuong pag-aaral ay nagkamit ng pagkalahatang mean na 4.90. Gaya rin sa antas ng pagtanggap naman ng mga mag-aaral ay nakakuha ng pangkalahatang mean na 4.91. Bawat panukatan ay nakakuha ng interpretasyong berbal na pinakamataas na katanggap-tanggap na nangangahulugang ang nabuong e-modyul ay may kaayusan, kaangkupan at katugunan sa pagpapaunlad ng kaalaman at kasanayan sa pagkatuto ng mga mag-aaral sa wika at kultura.

Sa pangkabuuan, ang nabuong e-modyul ay may malaking kapakinabangan sa mga guro ng asignaturang Filipino at sa ikauunlad ng pagkatuto ng bawat mag-aaral na naging tugon sa nararanasang hamon sa edukasyon sa kasalukuyan.

Keywords: Pagbuo at Balidasyon, Elektronikong Modyul

Utilization of Quality Tools in Assessing Production Defects of a Pottery Company in Pampanga

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Quality tools and techniques are of big help in the Process Improvement of the company. With the proper use of these tools, productivity of the company will be achieved. The scope of the study focused on the existing process of Terra Cotta Artworks Inc., in which quality tools and techniques were applied to improve its operation and quality systems. In this study, the Ishikawa diagram and Pareto Analysis was utilized in identifying the defects in each process of the company. The defects were analyzed using Pareto Analysis where in the three major defects identified were the chip-offs, size and shape issues. These defects were the major contributors to the product rejection. Further, Ishikawa diagram was utilized in identifying the causes and root causes of these major defects. Thus, the researchers argue and assert that if any pottery company shall implement the process improvement techniques, they shall improve their production and will achieve productivity.

Keywords: Pareto Analysis, Ishikawa Diagram, Quality Tool and Techniques, defects, process improvement, Pottery Company

Impact of Aspiring Politician's Biological Sex on College Students' Voting Preference

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It has been a common scenario in every country where men dominate the government of a specific state. Based on related studies and literature, this may lead to the lack of women's representation and opportunity to lead or govern a higher position in the community. With this note, this study aimed to find out the impact of the biological sex of the aspiring politicians on the college students' voting preference. It sought to find out the impact of biological sex on the voting preference of students by using a descriptive qualitative research. The 15 participants, composed of 2 male and 13 female participants, were categorized to be registered voters, first time voters, resident in either Magalang or Arayat, Pampanga, and still undecided on which mayor to vote upon the collection of data for the participants to focus on the candidates' biological sex and not on other factors. Semi-structured interviews took place and the data was thematically analyzed. Results showed that female voters feel empowered whenever a woman runs in politics and at ease to know that there is a representative of their sex in the government. On the other hand, male aspiring politicians were already common in the politics that participants found them qualified because they represented strength with the years of them governing. Based on findings, according to the participants, aspiring politicians' biological sex does not affect the voting preference of the first time voters for they consider politics to be an institution who does not require any biological sex for the position. With this, an aspiring politician may focus on presenting his abilities, experiences, commitment, dedication, and platforms in running for a mayor position in the government since the participants view biological sex to be a weak factor.

Keywords: Biological sex; college students; voting preference

The Language of the FM Radio: Basis for the Proposed English Enhancement Plan

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The study aimed to determine the language program formats of selected local FM radio stations in Tarlac, and the extent to which the language is used. After determining which of the local FM radio stations have English programs, the same programs were subjected to an oral presentation rubric to test the correctness and efficiency of the language. The study sought to find out if the same can be used as the basis for a proposed English enhancement plan for selected local FM radio stations.

The study utilized the descriptive research method to measure the extent of language use in the local FM radio programs, specifically determining consistency and continuity in so far as the test for grammatical correctness and accuracy of the language was concerned.

Results showed that of the five (active FM Radio stations operating in Tarlac, to wit; DWXT 96.1 FM, DZMC 91.1 FM, DZLT FM 97.7, DZRM FM 99.7 and MUEWS FM 107.9, only DWXT 96.1 had dedicated English programs in its general format. It was also found that two out of six (6) programs in the general format of DWXT 96.1 are English programs, making up one third (1/3) of the entire language program format.

The study aimed to determine the efficiency and correctness of the language use in the above-mentioned English programs. Respondent Communications and English Professors at the College of Arts and Social Sciences of Tarlac State University were provided with an Oral presentation rubric: an Intermediate/Advanced ESL, designed by Roseline Khan (2004) to test the language use in terms of fluency, grammar, vocabulary, pronunciation, and enunciation. The study showed that the language use of DWXT 96.1 FM had excellent and above average scores. The study found out that among the many areas of information that concerned listeners of FM radio, language use, or the use of correct English, was third among these areas believed to be informative.

On the basis of these findings, a proposed English enhancement plan was created, carrying into consideration the weaknesses and strengths observed in the results of the study. The proposed plan consisted of English radio programs and segments that could be accommodated by selected local FM radio stations in Tarlac who would be willing to adopt the same as tools of instruction.

Prediction of Response Reduction Factor of Infilled RC Frame Structures Using Artificial Neural Network

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Seismic regulations do not primarily include the effect of infill in the analysis of moment-resisting frames. The interaction between the infill and frames may affect the response of structures in resisting seismic forces; thus, the empirical code-based value of response reduction factor may not be applicable to other structural system. A series of nonlinear analysis for low-rise infilled RC frames are conducted to determine its response to earthquakes considering the effect of infills. This study intends to evaluate the behavior of infilled RC frame structures using pushover analysis in SAP2000 and to predict its response reduction factor using an artificial neural network (ANN) in MATLAB.

Significant effects on the response reduction factor of infilled RC frames are observed concerning the varying building configuration and infill's geometric configuration. The calculated response reduction factor from nonlinear pushover analysis does not yield a single value as suggested by seismic codes. Thus, ignoring the presence of infill in the analysis may overestimate the reduction of the structure's response to earthquake.

A heuristic algorithm was proposed to determine the optimum model using multilayer feed-forward backpropagation neural network. The comparison of predicted values with the analytical values yields an overall regression value of 0.99803 and mean square error (MSE) of 0.0169; this indicates the potential of using ANN's in predicting the response reduction factor of infilled RC frame structures considering the crucial parameters that affect its behavior during an earthquake.

Keywords: response reduction factor; low-rise infilled RC frame structures; pushover analysis; SAP2000; artificial neural network; MATLAB

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