17ᵗʰ World Conference on Applied Science, Engineering and Technology

(WCASET – 19)

Jakarta, Indonesia

15ᵗʰ - 16ᵗʰ March' 19

Organized by

Institute For Engineering Research and Publication

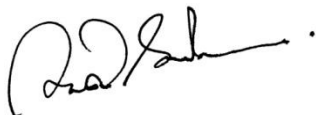www.iferp.in

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Preface

We cordially invite you to attend the 17th *World Conference on Applied Science, Engineering and Technology (17th WCASET-19)* which will be held at *Aston Priority Simatupang Hotel & Conference Center, Jakarta, Indonesia* on *March 15th-16th, 2019*. The main objective of *WCASET* is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Science, Engineering Management, Education and Technology. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in the review process, and to the authors for contributing their research result to the conference.

Since January 2019, the Organizing Committees have received more than 172 manuscript papers, and the papers cover all the aspects in Electronics, Computer Science, Information Technology, Science Engineering, Management, Education and Technology. Finally, after review, about 72 papers were included to the proceedings of *17th WCASET - 2019*.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of *17th WCASET-19*. We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

Rudra Bhanu Satpathy
CEO
Institute for Engineering Research and Publication (IFERP)

Acknowledgement

IFERP is hosting the 17*th* **World Conference on Applied Science, Engineering and Technology** this year in month of March. The main objective of 17th WCASET is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points, and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The sessions serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and become known as a thought leader.

I express my hearty gratitude to all my Colleagues, staffs, Professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful. I am also thankful to all our delegates for their pain staking effort to travel such a long distance to attain this conference.

A. Siddth Kumar Chhajer
Director
Institute for Engineering Research and Publication (IFERP)

Keynote Messages

Message from the Act. Rector Universitas Negeri Jakarta

I am honoured and delighted to welcome you to 17th - World Conference on Applied Science Engineering and Technology (WCASET - 19) which is organized by Institute For Engineering Research and Publication (IFERP) in collaboration with Universitas Negeri Jakarta, Indonesia and Agile & Sustainable Manufacturing Research Unit (ASMARU) IIUM, Malaysia. Welcome to all speakers, presenters and participants of the conference and wish you all have great success in the conference.

Distinguished guest, ladies, and gentlemen, the globalization processes which related to the revolution industry 4.0 have linked science, engineering, technological, and economic development. The advanced science, technology and development economy contribute to the complexities of social life and underpinning the importance of preparing the young generations. Educators and education systems are charged with the task of preparing students to live in a complex global society that will require them to deal with local, national and global issues. Therefore, it is essential for the education system and educators for preparing generation in facing these challenges.

Science, engineering, and technology play important roles in the development of a nation that eventually we can stand high and compete at the global level. However, the challenges are how to build the mindset of the next generation taking part in this development. The WCASET aims to bring together academics, scientist, students, postgraduate students and practitioners to share and discuss theoretical and practical knowledge of problems, new trends and applications in science, engineering, technology and its application.

Distinguished guest, ladies, and gentlemen, the success of the conference depend ultimately on the many people who have worked hard in planning and organising both the technical program and supporting social arrangements. Please let me extend my deepest gratitude and highest appreciation to all committee members. I would also like to thank all keynote speakers, invited speakers as well as workshop speakers for the contributions. I would like to thank all sponsors and individuals who have contributed to the organisation and success of this conference, each of the participants for attending our conference and bringing your expertise to our gathering. Enjoy the WCASET and hope you find it intellectually stimulating and rewarding. Take time also to discover the many unique features of Jakarta, Indonesia.

Jakarta, 15 March 2019

Professor Intan Ahmad, Ph.D
Act. Rector Universitas Negeri Jakarta

Dear Colleagues,

Allow me to warmly thank the organizers of this important Conference for giving me the privilege of welcoming and addressing you all. For me it is an honor and a pleasure. I welcome you to the **17th - World Conference on Applied Science Engineering and Technology** which brings together experts and academics from around the world.

We know that the impressive progress has been made recently in industry that related to development of technology. Fourth Industrial generation will use 'Digital Reality' to change business practice, consumer behavior, operation decision and product precision. The interfacing of digital technology in industrial operation has improved efficiency and quality of products & services. Involvement of Artificial Intelligence, Internet of Things (IOT), Virtual / Augmented Reality, 3D Printing, Big Data and Robotics have significantly influenced industrial efficiency and performance. It will also change the environment of employment requiring different skills and levels of knowledge.

This conference will give us the opportunities to discuss and share our knowledge and experiences. I am particularly happy to be present in this conference and to exchange views with professors, colleagues and friends, that representing many well-known Universities and Research Institutes together with members of relevant international organizations.

I hope that you will find the conference and your stay in Jakarta both valuable and enjoyable. Thank you for your attention.

Jakarta, 15 March 2019

Hira Meidia, Ph.D

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WCASET – 19

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ABSTRACTS

The Experimental Studies of Adaptive Control to Stabilize the Automatic Unmanned Mini Quad rotor Helicopter Position

Jalu A. Prakosa, Research Center for Physics – Indonesian Institute of Sciences (LIPI), Tangerang Selatan, Indonesia

Victor B. Vtorov, Faculty of Electrical Engineering and Automatics, Department of Automatic Control Systems, Saint-Petersburg Electrotechnical University "LETI", Saint-Petersburg, Russia.

Abstract:--
      The automatic unmanned quad rotor helicopter will be the best massive logistic transportation in the future, particularly in archipelago country such Indonesia. A successful control of mini quad copter position stability as reference can easy to control the larger one. The difficulty to balance the center of gravity, unknown parameters and other uncertainties are the real problem to prefer an adaptive control method as choice for stabilizing thrust from each rotor. A homemade quad copter is built by microcontrollers as controller which ultrasonic and tilt sensors are used as vertical position feedback elements. The purpose of this research is to study experimentally the automatic mini quad rotor helicopter position stability when applying adaptive control method. The model reference adaptive control (MRAC) is applied which the relation of adjustable parameters and stability of vertical and angle position is investigated. It is established from the experiments, that the proportional control for all motor thrust is unable to stabilize the plant because it tends to be unstable and fly upside down. Because of adjustment mechanism, the thrust of each rotor is not uniform each other which change due to varying adjustable parameters to balance the position. Both angle and vertical flight positions must be used to build the reference model design. The proposed MRAC design by adjustment mechanism solution has successfully achieved asymptotic stability which can hover properly the quad copter plant.

Index Terms:--
      Experimental studies, adaptive control, quad copter, center of gravity, position stability, thrust.

Linking Leadership Styles and Organizational Culture to Organizational Commitment
(The Mediating Role of Procedural Justice in Automotive Industry)

Achmad Zawawi, Doctorate Student of The Jakarta State University.

I Made Putrawan, Professor in Ecology, Research Methodology and Management, The Jakarta State University.

Hamidah, Professor in Management and Finance, The Jakarta State University

Abstract:--
Organizational commitment is one of the key factors to create competitiveness in doing business for automotive industries. This research was aimed to analyze the direct-indirect effects of leadership styles and organizational culture on organizational commitment. Procedural justice has been used as a mediating variable. The instruments used to measure the variables are Leadership Styles (LS), Organizational Culture (OCu), Procedural Justice (PJ) and Organizational Commitment (OCo). Those instruments have a coefficient of reliability of 0.96, 0,95, 0.96, and 0.93 respectably. Data were collected from the 157 employee's population of the automotive component industry, PT. Nadya Karya Perkasa. The Collected data were analyzed by path analyses. This research will find out direct-indirect effects of leadership styles and organizational culture on organizational commitment, a direct effect of procedural justice on organizational commitment. By this study hopefully the automotive component industry will able to compete in the world market by improving the quality of employee's commitment.

Keywords:--
Leadership styles, organizational commitment, organizational culture, procedural justice.

The Limiting Physical Parameter of Nakayasu Synthetic Unit Hydrograph

Dian Kamila, Doctoral Program on the Department of Water Resources, Faculty of Engineering, university of Brawijaya, Indonesia

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M. Bisri, Department of Water Resources, Faculty of Engineering, university of Brawijaya, Indonesia

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Abstract:--

Hydrological approaches in the watershed systems have granted great contributions to the hydraulic structured planning. However, it is not too easy to understand the process of run off thoroughly. The important factor in the waterworks design is to know the flood which is happened and this value will determine the dimension of waterworks which is closely related with the risk and the economic value of waterworks design. The Synthetic Unit Hydrograph is a popular method that is used in many designs of waterworks mainly in analyzing the design flood of ungagged watershed. One of them that is usually used in Indonesia is the Nakayasu Synthetic Unit Hydrograph which is found based on the observation in Japan (1948). This model is depended on the corrected factor of α influential one on the ordinate and time base of unit hydrograph. This study intends to investigate the influential factors to the physical parameter of α on the Nakayasu Synthetic Unit hydrograph. The limiting physical parameters is predicted increasingly related to the morphometric factors of watershed.

Keywords:

Physical parameter, model, watershed

Web-Based Faculty Evaluation with Recommendation Support Module using Analytic Hierarchy Process Algorithm

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Dr. Andres C. Pagatpatan, Campus Administrator, Eastern Samar State University – Guiuan Campus, Guiuan, Eastern Samar, Philippines

Abstract:--
       The performance appraisal system including methods and procedures used in Colleges and Universities are continuously re-examined, reviewed, and revised to fit their purposes and effectiveness in promoting faculty development, productivity, giving of incentives and decisions on personnel actions. This study aims to develop and offer an alternative system of evaluation process for faculty members. Specifically, this study focused on the development of the Web-based Faculty Evaluation System with Recommendation Support Module using Analytic Hierarchy Process Algorithm which may give efficient way of evaluating faculty performance. The AHP algorithm was applied for shrewd analysis of the necessary recommendations needed for performance improvement of the faculty member, but it is still subjected to consideration of the decision maker. This research used the descriptive and developmental methods as this involved development and survey of its acceptability. The findings of the study showed that the overall assessment of the system yielded (n=378, M=4.55) with a descriptive equivalent as "Very Acceptable". This implies that the developed system address problems met on the existing evaluation process with all the methodologies used especially with the aide of AHP. We are hopeful that with this, the University management will improve its faculty development program.

Keywords–
Web-based Faculty Evaluation; Analytic Hierarchy Process; Recommendation Support; Web-based System; Faculty Performancce Assessment.

Detection of Philippine Musa Leaf Fusarium Wilt Disease Using Image Processing Techniques

Anndee Christian L. Tumulak, Technological Institute of the Philippines – Manila
Bryan G. Dadiz, Technological Institute of the Philippines – Manila

Abstract:--
　　In our modern generation where technology becomes more superior to the other traditional method, automatic disease detection of the plant in an early stage is a significant factor to prevent serious outbreak in the industry which affect not only in our country but in global agricultural economy, also reduces a large work of monitoring in a big farm. Banana as one of the major crop in the Philippines has been facing threats due to various diseases that reduce the production and quality of the food. This study proposing a prototype application for automatic detection of fusarium wilt disease using image processing technique. Image processing techniques are applied to enhance the images quality. The system includes several steps which involve image acquisition, image pre-processing, feature extraction, statistical analysis and identification of the disease.

Index Terms:--
　　Image processing, diseases detection, classification, fusarium wilt, banana Leaf

Analyzing the Quality of Phaseolus Vulgaris Family of Legumes Using Artificial Neural Network and "Bag of Features" Techniques

Mirafe R. Prospero, Technological Institute of the Philippines – Manila
Bryan G. Dadiz, Technological Institute of the Philippines – Manila

Abstract:--

The Philippine Council for Agriculture, Forestry and National Resources Research and Development-Department of Science and Technology (PCAARRD-DOST) has recognized the importance of cultivating legumes to the industry, identified legumes, among others, as a priority crop under the National Vegetable R&D Program and the need for innovating methods in agricultural area to improve processes in terms of producing better quality of agriculture products.

The study created a compiled binary executable prototype application based on trained data set and validated methods of digital image processing using ANN (Artificial Neural Network) paradigm while the "Bag of Features" technique was utilized for image segmentation and classification of the quality of Phaseolus Vulgaris family of legumes that are cultivated in the Philippines that yielded to high accuracy of output of the developed application.

Keywords:--

Artificial neural networks, phaseolus vulgaris, image segmentation

LPG Leakage Detector using Arduino with SMS Alert and Sound Alarm

Rhonnel S. Paculanan, University of Makati

Israel V. Carino, Jose Rizal University

Abstract:--

This project is conducted in order to detect the presence of LPG leakage as a part of safety system is concern. Apart from sound alarm, an SMS alert will inform the authorized person and the solenoid valve will be triggered to shut down the gas supply to prevent any harmful effects due to gas leakage. The Project Scope are (1) to detect gas leakage like LPG leak, Butane leak, Methane leak or any such petroleum based gaseous substance that can be detected using MQ5 Sensor, (2) to setup an SMS based Alert Mechanism and send SMS alert messages to specified mobile number input inside the Arduino program, (3) to produce a sound alarm during gas leak and stop the alarm once gas leak is controlled, (4) to Display status in an LCD using a 16×2 LCD module and to shut down gas supply using Solenoid valve.

The V-model method used to develop the said project. This method is very easy to understand and apply. The simplicity of this model also makes it easier to manage. The V-Model is based on the association of a testing phase for each corresponding development stage. This means that for every single phase in the development cycle, there is a directly associated testing phase. This is a highly-disciplined model and the next phase starts only after completion of the previous phase.

A prototype is a rudimentary working model of a product or information system, usually built for demonstration purposes or as part of the development process.

The prototype was evaluated by seventy – seven (75) respondents. And as the result of overall mean 4.73 gives the general interpretation that the study is accepted. This is the result of the mean scores respondents from different criteria such as Functionality, Usability, Reliability, Efficiency and Relevance. The average mean ratings of possible users both for Household and Employee are from the range 4.48 to 4.84 that means excellent.

As a Conclusion, the findings of the project were a successful simulated, as well as practical implemented based on the indicators.

As a Recommendation, the analysis of the project given by the evaluator are: to conduct more tests in order to improve the efficiency and in order to identify the possible enhancement of the functionality and to conduct an in-depth study whether the project can be integrated to other existing project related to security.

The Influence of Personal Hygiene and a Healthy Lifestyle on Environmental Sanitation

Yusriani Sapta Dewi, University of Satya Negara Indonesia
Deni Kurniawan, University of Satya Negara Indonesia

Abstract:--
　　This research aimed to found out the influence of personal hygiene and lifestyle of housewives on environmental sanitation, as an activity which has a purpose to improve and maintain the standard of the environmental condition which affects welfare. This research is an Ex Post Facto research with a 2x2 factorial design. In the research, random sampling method was used, and the samples were 80 thousand housewives in Kelurahan Depok Jaya, Kecamatan Pancoran Mas, Kota Depok, Jawa Barat, Indonesia. The data was analysed using two way-ANOVA and Tukey test. The results of the research are: 1) there was a significant difference in environmental sanitation between accurate and inaccurate personal hygiene; 2) there was a significant difference in environmental sanitation in people which has a healthy lifestyle and those who have not; 3) For the people with "good" healthy lifestyle, the ones which have accurate personal hygiene has more positive environmental sanitation compared to those who have inaccurate personal hygiene; 4) For the people with "bad" healthy lifestyle, the ones which have inaccurate personal hygiene has more positive environmental sanitation compared to those who have accurate personal hygiene; 5) there is an significant interaction influence between personal hygiene and healthy lifestyle on environmental sanitation. To improve environmental sanitation, personal hygiene and healthy lifestyle need to be considered.

Index Terms :--
personal hygiene, healthy lifestyle, environmental sanitation, housewives

Improved Isolation Coupling & Performance of a Compact 2-Element Microstrip Patch Antenna Array usning Novel Corrugated Structures

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Asem S. Al-Zoubi, Associate Professor, Member, IEEE

Abstract:--
Microstrip patch antennas are very often used in array configurations. A novel corrugated structure of a single Microstrip patch is investigated first. Very promising results were achieved. However, the isolation coupling issue, in particular and the antenna performance in general, cannot be verified with a single corrugated patch. Thus, in this paper, a 2-element patch probe-fed array is investigated in detail using the proposed novel corrugated structure with various shapes and depths to explore the various effect on resonant frequency and the isolation coupling in particular, without changing the patch separation and consequently the array size at all, but using only the effects of the proposed novel corrugated structures. These effects are also studied and reflected on the overall performance of such array. A significant reduction of the undesired isolation coupling is achieved with impressive improvements of the gain and cross-polarization levels. The novel structures would also provide further miniaturization of the array by shifting down the center frequency with maintaining the same array size. This technique can be applied as a building block for multi-element array in the E-plane and H-plane microstrip patch array arrangements. Full-wave analysis simulations with HFSS and Sonnet commercial softwares are used in the investigations.

Disaster Risk Reduction Mitigation and Preparedness in the Development and Emergency Planning Using Spatial Analysis

Arman Bernard G. Santos, Technological Institute of the Philippines – Manila
Bryan G. Dadiz, Technological Institute of the Philippines – Manila.

Abstract:--
 Accumulative occurrence of natural disaster has become a potential threat to human's health and resettlements along with the rapid increase of risk and greater impact of hazards in the society. Looking at the big picture, disaster institutes one of the paramount threats to people's lives including their personal health and socio-economic well-being. Before at hand, the local governments all over the Philippines are striving to create an emergency planning and assessment of the unpredictable situations of the ecological processes. Thus, in order to effectively mobilize natural disasters, the local government units have to invest and concentrate on geospatial data which can achieve positive results while contemplating on the four thematic areas of disaster risk reduction preparation and mitigation including risk identification, prevention/mitigation, preparedness/response and recovery.

This paper focused mainly on the identification, evaluation and assessment of spatial maps resulting in valuable information to provide a quick response to certain hazards, risks and vulnerability. Emerging technologies like the spatial maps to be generated by a prototype helps to cope up with sustainable economic development and the improved quality of life. This proposed research to be accompanied by the prototype will be benefiting the Municipality of Carmona. Considered to be a first class municipality, Carmona has been flourished with wealthy economic posture. Even though there is an economic stability, the municipality is susceptible to certain natural disasters like flooding, ground shaking, ground rupture and earthquake. Danger can be unexpectedly happened resulting from both economic and life threatening aspects.

This proposed research will be anchored to some of the algorithms needed to solve the problems and needed to provide solutions to the environmental situations that nobody knows when to occur. Among of the specified algorithms are spatial analysis narrowed down to Distance Matrix, Nearest-Neighbor analysis, Local Binary Pattern, Monte Carlo Based Simulation and Clustering Method.

Keywords:
Spatial analysis, risk reduction, distance matrix, nearest-neighbor analysis, local binary pattern, monte carlo based simulation and clustering method

Shape optimization method for composite polymers in 3D printing

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Md. Hazrat Ali, Department of Mechanical Engineering, School of Engineering, Nazarbayev University, Astana, Kazakhstan

Abstract:--
Topology Optimization is an effective method of minimizing waste and optimizing the structural design of the objects. 3D printing is one of the modern manufacturing technologies that can be significantly improved by implementing the topology optimization of the printed objects. Geometry optimization in manufacturing technologies can eliminate the unnecessary parts of the 3D printed objects that are not affected by loads, stresses and strains. Therefore, implementing this technique can result in a significant reduction of waste materials and production costs. In this paper, shape optimization by the Layer-by-Layer (LbL) method and shape optimization by Homogenization of composite materials are discussed. The computational analysis was conducted by specifically designing specimens for the tensile load and obtaining the optimized shape for each design. These flat plates have similar shapes, but different compositions. The first method proposes the development of composite structure by the Layer-by-Layer method and then applies the topology optimization process. The second method focuses on the development of a homogeneous composite structure by the computation of mechanical properties, which is then followed by implementing the topology optimization method based on ANSYS simulation. The main aim of this work is to compare and select the best shape optimization technique for the reduction of materials used in 3D printing.

Index Terms:--
Additive manufacturing, Layer-by-Layer (LbL), Shape optimization, Topology optimization.

Experimental Learning Based Online Training Development in Jakarta Religion Affair Training Center

Asip Suryadi, Jakarta State University
Basuki Wibawa, Jakarta State University
Asmaniar Idris , Jakarta State University

Abstract:--

This paper is a report of Research and Development on developing experiential based online learning system using MOODLE platform in Jakarta Ministry of Religious Affairs Training Centre. The instructional system is a fully online instruction consisting of three categories (main activities) namely; Program Orientation, Learning Activity and Evaluation. The Learning Activity consists of nine sub-categories (sub-activities) weighted of 120 lesson hours with a completion time of 16 (sixteen) weeks. Each sub-category consists of four sessions following David Kolb's model experiential learning cycles. The learning activities were presented in both synchronous and asynchronous. The synchronous activities were among others; interaction through phone, and social media chat, while asynchronous activities were in the form of reading, exercising, observation, online discussion, quizzing, doing tasks, watching video on demand (VOD) and so forth. The results of the evaluation showed that the instructional system obtained a good predicate which was indicated by several indicators; the level of graduation reached 61.88%, the average score of all activities was 87.37; significant difference between pre-test and post-test with significant score 0.00 measured in α 0.05, score of LMS 4.44, and score of tutor services was 4.58. Some problems were noted from the study, such as; participants' delay in completing an activity and the program as a whole were still high, participants' scores on the first chance were still below passing grade, the speed of tutors' responses on participants' work were still low, and audio visual resources were still lacking. Therefore, the research proposed some main suggestions, namely; improve the speed and frequency of tutor services, add quizzes in every activity to improve retention, and include more audio visual resources.

Index Terms:--

Experiential Learning, Learning Management System, Learning Activity, Retention, Skills.

The Role of Facilitators in a collaborative online learning Environment

Ifik Arifin, Jakarta State University
Basuki Wibawa, Jakarta State University
Zulfiati Syahrial, Jakarta State University

Abstract:--
     The intent of this paper is to survey the strength and weaknesses of facilitators in Collaborative Blended Learning programs, which were conducted in 13 cities in Indonesia, with 79 facilitators and 1,526 participants (1244 males, 282 females). The program was supported by Developers of a major multinational US based company, which is part of their global initiatives in Indonesia. The research project is actually based on a blended learning with 80% eLearning time and 20 % meet up with facilitators. These courses were free and offered to not only students, but also to IT Professionals. Near the end of the project, participants were provided with a brief intervention program of follow-up outreach, information, and resources. After completion, this study found interesting characteristics of facilitators, which impacted the success or failure of participants to finish the blended learning program. Thru competence assesment model the results of this paper are recommendations on how to be successful and what to avoid in a collaborative blended learning environment.

Model Development for Cardiovascular Disease Recognition Using Image Processing Techniques

Jerome L. Liwanag, Technological Institute of the Philippines – Manila
Jheanel Estrada, Technological Institute of the Philippines – Manila

Abstract:--
   The heart is one of the important parts of the body and the responsible for the circulatory system. It works non-stop to pump blood rich in oxygen and nutrients that every part of the body needs including our nails. Heart health or cardiovascular health needs to be monitored to prevent diseases that could threaten human's life.

In healthcare domain, medical practitioners use several cardiovascular tests such as blood test, electrocardiogram and etc. to be certain of the diagnosis. The diagnosis alone is costly and the treatment normally cost even more. Medical practitioners also examine the patients' nails to draw an initial diagnosis, however a healthy human eye have limitation in resolution and subjective in analyzing color, texture and shape. Normally pink colored nails are features of a good health and the changes or abnormalities pertains diseases or chemical imbalances in the body.

The proposed system will extract the features of the nail images base from the two features; color and texture. The generated extracted value of the said features will be trained using Naïve Bayes, Support Vector Machine and K-nearest Neighbor algorithm. The algorithm that will give the most acceptable prediction will be used for the development of the proposed system. The prediction of this algorithm can be serve as a guide in determining whether the patient has cardiovascular disease or not.

Keywords:
Heart, nail disease, texture extraction, algorithm

iDonate: A Blood Donors Information Management System in the Philippines Using Spatial Analysis Algorithms

Neil P. Balba, Lyceum of the Philippines University – Laguna
Ana D. Gadon, Romblon State University
Joan F. Ferranco, Romblon State University
Aileen K. Balba, Lyceum of the Philippines University – Laguna

Abstract:--
      The Philippines is an archipelagic country in Southeast Asia located in the western Pacific Ocean consists of about 7,107 islands. The population of the Philippines or the world is increasing every year and there are also increase in spreading of diseases and health issues. With this instance, increase in the demand of blood occurs. The researchers came up with the idea of developing a blood donor's information management system applying Spatial Analysis Algorithm to map the locations of the donation sites, the type of bloods, and the records of the donors.

The system could locate the possible areas of the donors to easily identify the places to find the most number of blood types in case a need occurs. This system was designed to accommodate interconnections of remote blood centers through major hub connections in the central office applying client-server technology. With this, updated recording, management of blood donations and on-time donors' records will become possible.

The researchers used quantitative method to test the functionality and designed the system using Waterfall model. The systems was found to be functional, reliable and accurate as evaluated.

Keywords:--
      Information management system, spatial analysis, blood donors, blood type, client-server technology

Does Extrinsic Motivation On Consumer Behaviors In Social Commerce Sites Matter To Millennials?

Pramis B. Wibawa, Brawijaya University
Basuki Wibawa, State University of Jakarta
Redisa C. Wibawa, Aberdeen University

Abstract:--
Social commerce has become increasingly impactful to e-commerce and has generated potential economic benefits. In social commerce, e-vendors may integrate social media with their traditional e-commerce sites. We develop a hypothetical model we have seen the need to explain how concerns about social commerce features may impact consumer behaviors and facilitate social commerce benefits from the extrinsic motivation perspective and consumer decision-making models. We identify four types of extrinsic motivation including; external motivation, introjected motivation, identified motivation, and integrated motivation; and we examine their influences on consumers' intention to contribute social commerce information, which in turn leads to their subsequent behaviors and increases the consumer decision making models. This study proposes a comprehensive model by specially refining its Extrinsic motivation positively influences intention to social commerce information, which, in turn, affects online social interactions, and investigating the influences of social interaction on purchase intention and actual purchase behaviors, consequently increases the likelihood of product purchases on s-commerce sites. Theoretical development of this research contributes to both marketing and information systems disciplines in the social media and millennials era.

Keywords:--
Social commerce, Extrinsic motivation, Intention to Social Commerce Information, Word-of-mouth communication, Observational Learning, Purchase Intention, and Actual Behavior

The role of Leadership as Mediated Factor between Work Team and Communication with Employees' Organizational Culture

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Abstract:--

Organizational culture, in any institution, would determine how people behave. It will also be affected by leadership styles. The objective of this research was to find out whether leadership (LS) plays important role in linking between work team (WT) and communication (Com) with employees' organizational culture (OC). A causal survey used by selecting randomly 125 employees of Jakarta Muhammadiyah University. There were four instruments developed which measured OC (28 items), LS (34 items), WT (32 items) and Com (33 items). Its reliability respectively, 0.90, 0.93, 0.87, and 0.91. Data were analysed by regression, correlation and path analysis. Results showed that LS was strong and significant only as a mediated role between Com and OC and it was significantly directing the effect of Com on employees' OC. However, WT was not significant in affecting OC directly or indirectly through LS. This finding implied that employees' OC could be changed merely by the role of LS as change agent and its effect would be strengthen by involving Com, especially in term to build a university atmosphere indicated by its university culture.

Keywords:--

Path analysis, Randomly, Regression & Correlation.

The Influence of the Assessment Model and Method toward the Science Learning Achievement by Controlling the Students' Previous Knowledge of Mathematics

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Abstract:--

This research aims to study the influence of the assessment model and method toward the science learning achievement by controlling the students' previous knowledge of mathematics. This study was conducted at SMP East Seram district with the population of 295 students. This study applied a quasi-experimental method with 2 X 2 factorial design using the ANCOVA model.

The findings after controlling the students' previous knowledge of mathematics show that the science learning achievement of the group of students assessed by the analytic assessment method (the analytic rubrics) with the peer assessment model is higher than the science learning achievement of the group of students assessed by the analytic assessment method with the self-assessment model. The science learning achievement of the group of students assessed by the holistic assessment method (the holistic rubrics) with the peer assessment model is higher than the science learning achievement of the group of students assessed by the holistic assessment method with the self-assessment model. Overall, the result found in this study is the science learning achievement of the group of students assessed by the analytic assessment method is higher than the science learning achievement of the group of students assessed by the holistic assessment method for all assessment models.

Keyword:--

Assessment model, assessment method, science learning achievement, previous knowledge of mathematics

Design and Development of a Home-based Uric Acid/ pH Level Analysis Device for Gout Patients: A Health Information Technology Application (HIT)

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Abstract:--
        Nowadays, technology affects every distinct aspect of modern society. Hi-tech revolution invades the way people live in this technological era. As the Philippine healthcare industry crosses the threshold of digital age, the needs for a health information technology device challenges the proponents to make a possible solution in creating a system related in health care. The proponents come up with the idea of creating a device that will analyze the urine pH of a gout patient and correlate it to the uric acid level.

The proponents designed and developed a home-based uric acid/ pH level analysis device for gout patients that is capable of measuring the urine pH of the user and correlate it to the uric acid level. This study is divided into two parts; the first part is the hardware part wherein the proponents used Arduino Microcontroller, Bluetooth module, pH sensor kit and power boost converter. On the other hand is the software part, which includes the Arduino IDE and B4A software. This device uses an android application in order to display the result of the test and the medical status and profile of the user.

The android application has a purpose for doctor and patient interaction for the doctor's clinical recommendation. The proponents are able to build a device that measures the pH/uric acid level of a gout patient using the pH sensor and the Arduino micro controller.

Keywords:
Uric acid level, arduino microcontroller, HIT, B4A, pH sensor, Android

Solar Energy Harnessing Optimization Algorithm in a robotic Solar Tracker with Arduino Based Monitoring System

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Abstract:--
        Solar power though an abundant source of renewable energy must be optimized and utilized properly. But one of the main factors to maximize its benefits is the capacity to efficiently channel its power. Creating a good sunlight tracker in harnessing solar radiant to its optimum potential in the Philippine environment, where weather condition has become erratic due to the effect of climate change in climate variables (such as temperatures, rainfall, storminess, winds, etc.) based on baseline climatic conditions is the main reason of this endeavor.
The study developed a prototype robotic sun tracker operated by a microcontroller using the sun's perpendicularity and shadowing techniques in the design of the mechanism that injected an intelligent comparator algorithm to execute the best turn to harness the maximum radiant energy with Arduino based monitoring system that compared and presented the high efficiency of the results using a robotic sun tracker system.

Keywords :—
        Solar energy, harnessing optimization algorithm, solar tracker, Arduino, monitoring system

Central Jakarta Air Quality Forecast based on PM 2.5

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Abstract:--

Air, as one of the main key factor for all living beings, can be easily polluted by many pollutants. To know the quality of the air in a region, Air Quality Index (AQI) has been developed. There are many measurement elements to calculate AQI, but the most dominating one is PM2.5. PM2.5 is the measurement of particulate matter less than 2.5μ in diameter. In this study, we try to forecast the Central Jakarta Air Quality based on PM2.5. Three conventional moving average methods and one hybrid moving average method are incorporated in this study to predict future values of AQI based on historical data we have. Based on the experimental result on 730 preprocessed data, we found that all the conventional and hybrid moving average methods can be used to forecast the future values of AQI in Central Jakarta.

Index Terms
Air Quality Index, Forecasting, Moving Average Methods, PM2.5.

Stabilizing Cooking Oil by Mangosteen (Garcinia mangostana L.) Peel Crude Extract

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Abstract:--
Increase use of cooking oil with decrease source available has made the price going rise. This has made people use cooking oil repeatedly. Repeated use of cooking oil will break the oil structure and create harmful effect. Disruption on oil structure cannot be hindered but it can be lowered by adding stabilizing agent. The purpose of this study was to assess the role of mangosteen in stabilizing cooking oil. Preliminary descriptive study was done against flavonoid content and DPPH radicals scavenging activity of some antioxidant plant. Samples used were mangsoteen peel, celery leaves, tea leaves and citrus fruit. Experimental method of mangosteen activity used was CRD (completely randomized design) with 3x4 factors. Factors applied was solvent type (chloroform, aquadest, ethanol) and extract concentration (0 μg/ml, 90 μg/ml, 100 μg/ml, and 110 μg/ml. Parameter measured were free fatty acid number (FFA) and oil turbidity. Data was analyzed with two ways Anava followed by DMRT. Preliminary results showed that the highest level of flavonoid was found in mangosteen peel (72 g/kg) followed by celery (37.9 g/kg), citrus fruit (25,5 g/kg) and tea leaves powder (13,9 g/kg). DPPH radicals scavenging activity ranging from 71,1 % of mangosteen peel, 48,2% of the celery, 13,2% of citrus fruit and 11,2% of tea leaves powder. Preliminary result confirmed the best use of antioxidant from mangosteen compare to others. Experimental result showed that 110 μg/ml aquadest was the best combination to give lowest FFA value (1.24%). Whilst, oil turbidity didn't show differences under treatment given. Ethanol was found give highest FFA value (5.11%). It can be concluded that mangosteen peel is able to stabilize cooking oil and solvent with extract combination give impact on free fatty acid number of cooking oil.

Keyword:
mangosteen peel, cooking oil, free fatty acid

A Collection Management System for USC Museum

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Abstract:--
      Museums are institutions that showcase the cultural, scientific, artistic, theological or historical facts of a place. These are usually visited by people during educational tours or family vacations as one of the top tourist attractions. Though the museum has existed over 50 years and continues to be functional, it has not received enough recognition from people inside and outside of USC. This sparked a motivation in the researchers to develop a web-based collection management system for the digitization of the museum to promote the features and priced artifacts of the historical institution. In this paper, the researchers share their experiences, in both functional design and implementation, as well the experience of the users in developing the system with a 360-degree view of some artifacts.

Index Terms:--
      Museum, Collection Management System, 360 – Degree View, Artifacts

Environmental Mapping of the Different Barangays in the Philippines with the Implementation of Breadth-First Search Algorithm

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Abstract:--
Environmental mapping of the specific helps to identify certain potential risk pertaining to the ecological balance, sanitation, and land degradation. In order for the barangay to keep progressing and to move away from certain risk and hazard due to the potential risks, its constituent must be aware of the certain precautionary measures underlying ecological balance. The thrust of each barangay from a certain municipality is to reduce hazards, threats and vulnerabilities which can be accompanied by a software or system efficiently giving results and tremendously gives impact to the society.
One of the main transitions is by the use of a geographical information system to provide accurate results abrupt to the substantial information relating to the safety and preparedness of the constituents and the municipality as well. Environmental mapping as one main content of Geographic Information System is used to deliberately produce factual information regarding hazards, threats and vulnerability around the target area. Environmental mapping through the use of a prototype and Breadth-First Search Algorithm can help the community. People should be properly informed and warned about the effects of the impending calamity so that they can be prepared when that kind of disaster hits the area. A warning system is defined as a means of getting information about an impending emergency, communicating the information to those communities who will be affected of environmental break down.

Keywords:
Environmental mapping, breadth first search algorithm, warning system, vulnerability index

Analysis and Employment of the Use of Ant Colony Algorithm to Eliminate Liquefaction, Soil Erosion and Landslides in Some Areas in the Philippines

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Abstract:--
　　　　Determining disaster in the surroundings is definitely both predictable and unpredictable. In everyday life, both senses combine to give complementary information about the world. Disasters are seen as the effect of hazards on vulnerable areas. Hazards that occur in areas with low vulnerability do not result in a disaster, greater damage, loss, destruction and devastation to life and property but gives a minimal burden to those simply affected the disasters. The immeasurable damage caused by disaster varies with the geographical location with different geographical boundaries and attributes.

The researchers have attempted to reduce the costs of these disasters while continuing to carry out the policies that encourage development in vulnerable geographic areas of the Philippines. With threats imposed by liquefaction, soil erosion and landslides, the researchers see that many communities all over the Philippines are subject to increasing levels of risk and can achieve sustainable development through appropriately informed planning, protection, mitigation, and recovery strategies.

Reducing the impacts of disasters provides the structure and process for understanding the nature of natural and human-caused hazards and strategies for building sustainable communities. The key to sustainability is acknowledging the unique nature of the local community and how geography, social systems, the economy, and infrastructures in influence a community's capacity to withstand and recover from a disaster.

With all of these premises, the researchers have come up with a research pointing the analysis and employment of ant colony algorithm to eliminate all forms of natural disasters. The researchers have utilized specific computational theory underlying ant colony algorithm to simply eliminate the occurrences of liquefaction, soil erosion and landslide happening in some areas in the Philippines.

Keywords:
Liquefaction, soil erosion, landslide, ant colony algorithm, disaster, vulnerability index

Design and Development of Artificial Intelligence Tourist Guide Navigator Using Levenshtein Algorithm

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Julie F. Fallaria, Romblon State University
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Abstract:--

Philippines, an archipelagic country in Southeast Asia, is known to be abundant with natural resources. The country is identified for different beautiful beaches, natural marine sanctuaries, native and international restaurants, preserved old infrastructures and other beautiful spots in different places. There are lots of published and commercialized tourists' spots and restaurants, however, not all sites are being advertised and the directions to reach each place become a problem. The researchers came up with an idea of developing a tourist guide navigator applying Artificial Intelligence that can respond to the request of the traveler using Levenshtein Algorithm. This algorithm helped to sort the list of closest location, the top location, having the smallest Levenshtein distance to the analyzed label. The design of the system used Waterfall Model that led to come out with the right and short geographical directions and produced statistical records of the number of visitors stayed in the area. The developed system also showed the details of the spots and the required information needed by the tourist. The system was found functional, reliable and accurate as tested and evaluated.

Keywords:

Artificial Intelligence, Navigator, Levenshtein Algorithm, Tourist Spots

Effect of each shell thickness on deformation stress and the ability for causing the cracks in the multilayer doubly curved shell roof

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Abstract:--
In the study of the state of deformation stress of multilayer doubly curved shell roof, the boundary conditions have a great effect. However, in the multilayer doubly curved shell roof, the change of each shell thickness also affects the deformation stress in the shell and the appearance of the cracks on the concrete shell is also different. In analytical studies, Vlasov, Ambarsumian, Thanh Huan Le, etc. have been implemented, but it is not clear that how the deformation stress in the shell is if having the effect of the change of each shell thickness. Therefore, in this paper, the author studies the change of the thickness of each shell to consider the effect of such change on the deformation stress in the shell and the phase of appearing the cracks in the concrete in the case the steel fiber concrete layer under the normal concrete layer with the boundary condition that the curved beam section is not changed by ANSYS numerical simulation software.

Key Words:—
steel fiber concrete; doubly curved shell roof; multilayer shell; ANSYS numerical simulation; effect of each shell thickness

2Cebu: A Travel Guide Web Application for Assisting Tourists in the Province of Cebu

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Abstract:--
        The province of Cebu is an ideal destination for tourists whether local or international, making it one of the most sought vacation spots in the country. Its variety of tourist spots indicate that Cebu has a lot to offer that tourists ought to discover. Since so much about Cebu has made the rounds in a variety of media, it is in this aspect that information gathering has been confusing and inefficient. The goal is to provide tourists up-to-date and accurate information in a centralized platform. For this study, a web-based application was developed which provided all necessary information and tools that can be used by tourists to plan and organize their trip, locate tourist spots and visit the areas in the province of Cebu. The satisfactory result of 3.9 for User Acceptance Testing show that it has met the goal of creating a travel-guide web application. The system creates more opportunities for Cebu's tourism industry to expand their reach and engagement to local and foreign tourists alike.

Key Words:—
        Travel guide, web application, information system, tourist-guide web application

Solutions to improve the quality of mass concrete construction in climate conditions of Southern Vietnam

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Abstract:--

Concrete is the most commonly used material in construction works, a mixture of sand, stone, cement, water and other substances (if any). To become the concrete, the cement will create reaction with water, producing the heat, which turns the cement into the stone and concrete. This phenomenon is called hydration heat. When constructing foundation framework of high-rise buildings, related units such as investor, design consultant, supervision consultant, construction unit rarely pay attention to the phenomenon of the hydration heat because of the Vietnamese standard of TCXDVN 305: 2004 "Mass concrete - Code of practice of construction and acceptance" conventionalizes that it is necessary to pay attention to the phenomenon of hydration heat when the smallest size of concrete from 2m or more. The Southern Vietnam is a region with a tropical monsoon climate, with 2 distinct rainy and sunny seasons. The rainy season is influenced by the southwest monsoon, so the intensity of rainfall is quite large. In the dry season, thermal radiation is also higher than other regions. Such hot and humid climates have a great impact on the quality of the concrete and reinforced concrete, especially in the process of hardening and forming the original structure of the concrete. The sunny weather, hot and dry air makes the concrete dehydrate quickly during the early hardening time, creating a hollow structure which reduces the intensity and the ability of waterproofing or causes cracking the concrete surface. The high solar radiation and strong winds also increase this ability. Therefore, the article presents "Solutions to improve the quality of mass concrete construction in the climate of Southern Vietnam"

Key Words:—

Concrete construction, reinforced concrete construction, mass concrete, concrete cracking, dehydrated concrete, etc.

Effectiveness of Muara Angke Polder System in North Jakarta

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Abstract:--
        Polder system is a solution for flooding in urban areas where the ground level is lower than the water level of the receiving water body. The effectiveness of the elements such as dike, canal/river, pond, drainage channels, and pump station greatly affect the performance of a polder system in controlling water level inside the system. The flood problems that always occur in Jakarta caused damages and losses are the background to conduct an evaluation which is presented in this paper. Jakarta is the capital city of Indonesia, where the northen-part of Jakarta is divided into 43 polder systems and one of them is Muara Angke polder. This study specifically addresses the Muara Angke polder system performance. Solving the problem of flood in Muara Angke area is should be based on the performance of the existing polder system as one of the flood control element. This study emphasizes on evaluating the existing Muara Angke polder system in controling the flooding. Muara Angke polder catchment area is around 1.46 km2. Daily rainfall data from Kemayoran Station is used to estimate the design flood. Using WinTR-55 model, the performance of polder system is evaluated by comparing the capacity of existing drainage channel, pump and pond to the design flood. The result shows that existing pump and pond capacity in some subcatchments are not sufficient to accommodate the design flood, where the effectiveness is less than 50 %. The queuing water then causes overflow in the drainage channels and flooding in the Muara Angke area could not be avoided.

Key Words:—
        Design flood; flood control; Muara Angke polder system; performance evaluation

iSAKAY: Android Based Booking System for Tri-Bike Operators and Drivers Association with Cloud-Based Data Analytics

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Abstract:--
　　Convenient routine of riding in a public transport is by at large, a primary concern of the commuters as they conform on their safety while reaching such destinations.　　Vital to this, transportation resembles a big role in our modern society specifically when reaching any destination while carrying goods and service not only for convenience but also safety. Since the earliest days of the industrial revolution, transportation has smoothed economic development by moving materials, resources, products, and people. Rural areas in the Philippines are known in the use of "Trikes" or Tri-bike, a motorcycle attached to a side car, in transporting from one place to another. "iSakay" is a Filipino word meaning "ride" or "to book for a ride". Due to the increasing needs of the commuters in the rural areas, ineffectiveness in communication with the drivers have still experienced and mostly, the difficulty in acquiring a ride in tri-bike becomes a problem.

The researchers came up with an idea of designing and developing an Android-Based booking system that centralizes the transport management of the tri-bikes in the rural areas around the Philippines. The centralized booking system can massively produce a dashboard by means of showing data analytics via "cloud" as input and guide for the future enhancement and development of the tri-bike management system. The researchers utilized waterfall model in the development of the said software which in turns led to emanate beneficial solution to the commuters. The systems' functionality, reliability and accuracy are tested and evaluated which in turns gives a very simple yet important recommendation easing the normal problems faced by those rural ares in the Philippines.

Keywords:
　　Online Commuters, Booking System, Tricycle, Tribike, Transportation, Waterfall Model, Cloud, Data Analytics

Design and Development of a Multi-Purposed Arduino Based Solar Powered Bird-Pest Deterrent Device

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Abstract:--

Radical changes to reduce troublesomeness is at risk specifically when human are trying to eliminate environmental factors such as pests, climate change and other external factors. Eradication of these factors have pushed human to intervene and develop prototype attuning to the technological advancement to lessen some potential threats. One of the ultimate highlight is by adopting Arduino technology to yield high production capacity in farming and trading. The study focused mainly on the demographic attributes and underlying problems occurred in the province of Romblon.

In the province of Romblon, rice production is heavily affected by bird-pests foraging for food in the rice field throughout the year despite of the efforts of the farmers to ward them off. This study is undertaken to mitigate the damage cause by bird-pests and help farmers increase their rice production by infusing technology to the farming activities where it is mostly applicable and substantially effective.

To make this happen, the researcher employed purposive sampling, survey questionnaire, unit testing and experimentation to gather different sets of data. These data were then analyzed using weighted mean and percentage. The results indicated that the overall assessment rate of the bird-deterrent device and the technology-driven bird-deterrent practices were strongly perceived by the farmer-respondents to be helpful and beneficial for them. Moreover, the data gathered in the experiments and observations in the testing site supported that the device was effective in detecting, dispersing, and deterring birds in the rice field.

Keywords:

Agriculture Industry, Arduino Microcontroller, Bird Deterrent Device, Bird Pest, Solar Power

Evaluation of One Stop Services of Employment Placement, Protection and Expansion Programs of Gianyar Regency - Bali

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Abstract:--

The purpose of this study is to evaluate the one stop service of employment placement, protection and expansion programs of Gianyar regency Bali that the local government run on one – stop integrated service. The one – stop integrated service is an advance public services on license, legal document related to identity, immigration document, health condition for migrant worker and others documents in recent years. This research is done by observation, interview and documentation with Discrepancy Evaluation Model method. The method is to evaluate design, installation, process and the Implementation of the Placement and Protection programs of Indonesian Migrant Worker against the role of local government on one-stop integrated service. The conclusion of this study indicates that there is a gap in discrepancy at 15,82% from the target to be achieved

Keywords:

One stop integrated service, license, document identity, health condition, discrepancy evaluation model

Social Conflict Settlement In Indonesian Context: What Type of Leadership Competence Required?

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Abstract:--
Purpose : This study aims to explain and explore leadership competencies possessed by Indonesian leaders, particularly under the Ministry of Home Affairs, in dealing with the problems related with social conflicts based on ethnicity and religion (In Indonesian known as SARA).

Design/methodology: This study adopts a qualitative approach and observes the government institution dealing with security. The researchers carried out deep interviews with around 70 research participants, most of whom are mid-rank official leaders who in the past have been assigned to be involved directly in dealing with social conflicts. All of them have a ten to twenty years working experience. The main analysis in this paper is based on the case study model (Yin, 2015; Creswell, 2016).

Findings: The result of the study shows that the elements of knowledge, governance managerial skills, as well as the attitudes that would coordinate and develop social capital, are deeply needed. However, among these three elements, the social capital is the most influential element that may influence the elements of coordination, knowledge, and skills.

Research implications/limitations: This study has practical implications on effective leadership and competences, particularly in their attempt to find solution for social conflict in a wider society.

Originality/value: This study shows how social capitals, roles and functions of social institutions, as well as social intelligence are crucial and strategically significant for Indonesian bureaucracy's strategy in solving social conflicts.

Keywords:
        Leadership, Competence, Social Conflict, Indonesia

Model of Collective Bargaining for Productivity Improvement "A case study from Indonesia manufacturing company"

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Abstract:--
The main purpose of this paper is to gain in-depth understanding about Collective Bargaining (CB) practices in Indonesia manufacturing company. The research is taken place in a largest automotive Manufacturing company in Indonesia that had succed improving its productivity and this study tries to build its model through its bargaining agreement practices.

Beardwell, Holden & Claydon (2014) model is used as a theoretical framework in analyzing phenomena and then is developed in finding the social themes behind it.

The study uses qualitative approach by adopting case study method that was suggested by Yin (2012). Data is collected by using observations, document analysis, and in-depth interviews conducted formally and informally by using snowball sampling techniques. Data are analyzed as it is suggested by Huberman & Miles (2009).

The study found that reasons behind a proper CB policies and practices between union and management are both of parties: (a) stand for government regulation and follows the rules; (b) try to understand each other and hold commitment to cooperate as they have signed in Collective Bargaining Agreement (CBA) and (c) denying political interest in conducting CB and focus only on company productivity. Further data analysis found out that these phenomena are grounded from its corporate business value about people and also company policy about its production system.

The study shows that the key elements in practicing collective bargaining agreements that lead to productivity improvement is not determine how strong is the power, but lies upon how its corporate business values about its employees and what system the company adopt to produce its product.

Key words:
Collective Bargaining, Corporote Business Value, Production System, Productivity Improvement

The Effect of Learning Strategy E-Learning and Student's Independence in Learning to Learning Results of Learning TAFSIR

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Yufiarti, Educational Technology Study Program, State University of Jakarta

Abstract:--
The objective of study is to find the effect of e-learning strategy and the independence ability the students learning outcome and the interaction of those two variables on students achievenment in basic theory of tafsir. The research was vield an experimental method with 2x2 factorial design and was conducted at STAI Alhikmah collage, Pasar Minggu involving 100 students which were divided into four groups of 25 samples each. The findings of the research indicated that; 1). In general, it was found that by applying the e-learning, the mean score is higher than applying the conventional strategy. 2). For students having higher abstractive thinking ability, there ware differences in applying the conventional strategy. 3). For students having low independence ability, The students score of learning that used the conventional strategy were higher than those who used the conventional strategy, and 4). There was an interaction between e-learning strategy and the independence abilty.

Determining the Proximity of Man-Made Disaster Through an Aid of K–Nearest Neighbor: A Basis or Risk Reduction Plan Framework

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Abstract:--

Man-made disaster is one of the most dynamic issues that a world must taking into account. Closeness to several disasters compliment to the alarming number of incidence in most areas and at the same time diminishing human population in terms of safety and fruitful life. Thus, ensuring the safety and reducing risk at a high level, the researcher had come up with an idea of determining the proximity of man-made disaster to eliminate and reduce risk at a certain level. With this research, the risk reduction management team and the people living in some areas in the Philippines will become aware of the current situation that reduces certain risk of accident and fatalities.

This study will focus on determining the proximity of man-made disaster through the use of K-Nearest Neighbor which tends to become the basis for reducing risk and fatalities in some urban and rural areas in the Philippines. KNN, a non-parametric algorithm is a simple classification and tends to become more useful learning algorithms. It uses data points that are separated into different classes to predict the classification of new data points. With the help of KNN, this study will determine the proximity of the risk of man-made disaster through identifying points of higher vulnerability of man-made disaster around the area.

Keywords:
man-made disaster, risk reduction, K-Nearest neighbor, learning algorithms

Intensive Analysis of Using Clustering Method towards Identifying Polluted Areas in the Province of Romblon

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Abstract:--

Vast amount of datasets where being extracted to find solutions to the never ending environmental problems. Most of the problems encountered by human even in the entire world is pollution. At this junction, air pollution in a very drastic way had tremendously considered as one of the environmental issues that needs to focus on. Experts are trying to consolidate data sets from different corner and try to establish solutions based on the severity of pollutions in the air.

This paper discussed the intensive analysis of implementing clustering method to identify the region of data sets with high vulnerability and hazard index in terms of air pollution. Thus, the clustering algorithm as part of data mining helps to identify potential risk in the province of Romblon. Through clustering algorithm, the researchers were able to measure the frequency and proximity of all the datasets leading to valuable results. This paper have discussed and presented the actual air pollution in the province of Romblon including those in the resettlements areas and in the remotely located areas.

Keywords:

Clustering Method, Polluted Areas, Air Pollution, Air Quality Index, Vulnerability Index

Sport Psychometric Through e-Learning: Offline, Edmodo, and Mobile Learning

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Abstract:--
This research was aimed to create new textbook products that will be used in discussion activities and facilitate lecturers in delivering lecture material and achieving expected learning goals. This research was a Doctoral curriculum development for Mental Training Course (Sports Psychometry) based on KKNI using e-Learning (Offline (Mmi), Online (Edmodo) and Smart Phones (Sigil)). The method used was qualitative and quantitative research using the Research & Development (R & D) development model from Borg and Gall. Based on the results of the effectiveness test using the t-test, from the differences in the results of Sport Psychometric Material Knowledge between pretest and posttest, the price of tO = 42,647 was greater than the price tt = 0,000 (at the 0.05 significance level), so the null hypothesis was rejected. It can be proven, there was a significant difference between the results of the pretest and posttest of student knowledge.

Keywords:
Curriculum Program, Physical Education, e-Learning Educational.

Motivation, Strategy and Supporting Procces for Increase Research Productivity in Higher Education Institution

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Abstract:--
        This study aims to express comprehensively about how to motivate of the lecturers in research, stategy and supporting the research process for increase the research prductivity in teacher training and education science Mataram, West Nusa Tenggara. This research is a qualitative research by using the intrinsic case study approach.

The results of this study showed that; 1) Motivation: a) Intrinsic motivation includes: awareness of scientific development, Obligations of Higher Education Tri Dharma, and Facilities to increase lecturer functional positions. b) Extrinsic motivation includes: research culture, work climate, institutional support and improving the welfare of lecturers; 2) Strategy: a) Hold routine activities Focus Group Disccusion (FGD) which discusses the development of science and technology and research, b) Organizing colloquium activities colloquium, training and workshops on research at least once a year, form a team of competent reviewers to determine the quality of research, formed a study center, and establish cooperation between universities, local government, companies and international institutions; 3) Supporting procces includes : a) Provision of optimal sources of literacy, b) optimizing the functions of the center of research and community service to manage research activities, c) providing research support facilities, provide assistance for research funds and national and international publications.

Based on the findings of this study, it must be recommended in order to be a continuous and comprehensive effort to improve the research productivity of the lecturers, especially in publishing the results of the lecturers' research into national and reputable international journals.

Keywords-
Motivation, Strategy, Supporting Procces, Research Productivity

The Effect of Personality and Integrity to Affective Organizational Commitment

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Abstract:--
      Affective organizational commitment felt by employees in institutions provides benefits to the institution because of the emotional attachment of the individual to the institution influenced by personality and integrity factors. That is why the objective of this research is to find out whether there is a direct effect of personality and integrity on employees affective organizational commitment. A causal survey used by selecting 116 employees at Universitas Negeri Jakarta by using Simple Random Sampling (SRS). There were three instruments developed to measure affective organizational commitment (37 items) with a reliability of 0.961, personality (44 items) with reliability 0.967, and integrity (29 items) with a reliability of 0.94. Data were analyzed using regression, correlation, and path analysis. The results showed that personalityand integrity directly and significantly affect employees affective organizational commitment, however integrity was not a good mediated variable between personality and affective organizational commitment. These findings mean that when employees organizational commitment would be improved, factors such as personality, especially big-five personality and integrity could be taken into account.

Keywords-
      Personality, Integrity, Affective Organizational Commitment, Management, Organizational Behavior.

The School-Based Pesantren in Border State, An Alternative to Caracter Education for Children of Indonesian Migrant Workers ?

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Zaenab Hanim, Universitas Mulawarman

Abstract:--
     The focus of this study was the management of institution education what implement of integrated school with religious education units. This involved the educational role of an institution in Sebatik Nunukan District, School-Based Pesantren Mutiara Bangsa, as a community-based structure supporting government's programs and helps tackle educational issues in border areas.This research used qualitative approach in case study method through data collection, in-depth interviews, participatory observation, and documentation. The Data were analyzed using Robert K. Yin analysis. The findings established that Mutiara Bangsa Islamic Boarding School was the right option in the border area considering increasing human resource needs of the society. In addition, it has a strategic role in the border area and serves as a tool for government programs implementation. Such programs are mainly character education, a sense of nationality providing learning services in the outermost, foremost, and disadvantaged areas, and an alternative education for the children of Indonesian Migrant Workers.

Keywords-
     Caracter education, Islamic Boarding School (pesantren), Children of Indonesian Migrant Workers. Sebatik Nunukan District, Indonesia.

Evaluating the implementation of teachers' assignment As school principals preparstionnp rogram in bontang

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Sutjipto, Jakrta State University
Thamrin Abdulloh, Jakrta State University

Abstract:--
Study about policy education based on its criteria benefits to develop science by having new knowledge to enrich research in public evaluation discipline and educational management research area. Policy evaluation of teachers' assignment as school principals will not only be able to give inputs to ministry of education and culture. But it will also give reinforcement to policy decision to make it successful for what it has been done. The role of principals is very essential to make the school have capability to shape intelligent and competitive Indonesian human capital. School principals as leaders are expected to become contributor to the success of governance reinforcement, accountability and public image of education. Their success to develop educational quality at school is very determined by their professionalism to do their duties, roles and function as principals. To develop their professionalism, it is very imperative to prepare selection of principal candidates. The implementation of proper selection system is hoped to bring about principal candidates who have high credibility since it has important role for education nowadays. It is also hoped that competent principals have capability to build good school cultural organization by emphasizing excellent service to learners and its community.

Keywords-
Educational Evaluation, School Principals, Professionalism

Education and Training Evaluation for Apparatus in Regional Public Hospital

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Abstract:--

The aim of this research was to evaluate the education and training of human resources apparatus at a Regional Public Hospital in Indonesia. It was conducted through the use of a qualitative method by applying the Context, Input, Process, Product (CIPP) model, with four different stages: Context, Input, Process, and Product. Moreover, Kirkpatrick evaluation model was conducted to examine the capability improvement of the medical officers. The data obtained through questionnaire and the documents needed regardingthe implementation of training and education. The respondents are 15 managerial officers in the hospital including directors and head of division. The result of the study showed the Context, Input, Process, and Product for the training and education provided by the hospital are very good. Then, it was concluded that the hospital still need to provide the training and education program for apparatus is still crucial for the a Hospital which not only offer the medical service but also some medical degrees in Indonesia.

Moving Towards Resiliency of Computer and Its Usage to the Faculty of Romblon State University: A Basis for Technological Standards Leading to Transformational Perspective

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Abstract:--
   Resiliency of computers to transform educational technology is at stake by most of the institutions and universities in the Philippines. Hindrance to technology was in turn a primary problem encountered by most the faculty members and the academic community as well. In order to produce competency by using technology, one must be able to adapt the fast growing needs of delivering information vital to sustainable learning. With these enumerable impressions, faculty members of Romblon State University are eager to deliver quality education but a little bit lacking of educational portal and electronic learning. They believe that creating and developing new platform for delivering education at a standard level provides an equal opportunity not only for them but also the their students.

This paper discussed the resiliency of using computer to the faculty members of Romblon State University. Moreover, this paper will serves as the basis for technological standards and protocols which leads to a transformational perspective in order to help the university in delivering good quality education and at the same time promoting level of standards when it comes to computer and technological usage.

Keywords:
   Resiliency, Transformational Perspective, Technological Standards, Information And Communication Technology

Intensive Analysis of Using Genetic Algorithm towards Determining Skin Type Diseases

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Abstract:--
Number crunching algorithms have superficially solved problems ranging from engineering down to health sciences. This in turns gives people an idea of simply integrating these number crunching algorithms to solve health sciences concerning diseases, viruses and other health problems. One main concern of our modern society is skin diseases due to some environmental factors like global warming, problems with the ozone layers, chemicals resulted from the productions of materials and goods and many like.

In medicine, electronic chips and computers are the backbones of a lot of imaging, diagnostic, monitoring, and therapeutic devices. These devices, which are composed of several different hardware components, are managed and controlled by software, which in turn are based on algorithms. An algorithm is a set of well-described rules and instructions that define a sequence of operations. Met heuristic methods are algorithms that can more quickly solve complex problems, or they can find an approximate solution when classical methods are not able to find an exact one. Seemingly, a Genetic algorithm is one best solution to specifically address health concerns. As part of heuristic method, genetic algorithm traces all the datasets and determine all possible points that an be viable in solving complex problems like skin diseases.

The study aims to objectively and rationally uncover the potential of using Genetic Algorithm, opportunities and threats as presented by the environment, the resources required to carry through, ultimately the prospects of success. Although the focus of this work is on a non-stationary algorithm in which mutation probability is reduced asymptotically to zero via a schedule in a fashion analogous to simulated annealing, the stationary distribution results existence, Cramer's Rule representation, and zero mutation probability limit are directly applicable to conventional, simple genetic algorithm implementation as well.

Thus, the researchers were able to find out the best solutions in determining skin type diseases and have integrated genetic algorithms to produce computations leading to the best results.

Keywords:
Intensive analysis, genetic algorithm, heuristic method, skin type disease

Automated Cleaning of Edible Bird Nest using Microbubble Technique

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Abstract:--
Edible bird nest (EBN) is one of the most highly valued food products in South East Asia and one of the demanding food product of China and Taiwan. In traditional Chinese medicine, EBN is believed to offer many beneficial effects to human beings such as growth promoting and immune-enhancing properties. Removing the impurities in raw edible bird nest is known as the most complicated task in processing the bird nest before consumption by human. The conventional cleaning method is not efficient and it is time consuming. As the demand of edible bird nest increase, it is necessary to determine a cost effective and efficient method as a cleaning process for the raw edible bird nest. Therefore an automated machine which adopt micro-bubble and shaking technique was developed. The mechanical microbubble technique was compared to conventional cleaning process in term of time, cost and quality of the edible bird nest. This machine improves the visual cleanliness of EBN up to 77.78%.

Keywords:
Automation, Edible, Bird Nest, Micro-bubble.

Organic Pollution in Mangrove Ecosystem at Tidung Island Kepulauan Seribu, Jakarta Indonesia

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Abstract:--
Tidung Island is one of the major tourist Islands located in Kepulauan Seribu, and has several important areas, one of which is the mangrove ecosystem, which currently has already been degraded from time to time. The aims of this study were to determine the status of organic pollution based on protozoa saprobic index and analyze some of the environmental factors that influence it. Descriptive method with survey design was used in this research. The location of mangrove ecosystem was divided into 3 observation stations and in each station divided into 3 sub-stations which are determined based on the conditions of the mangrove vegetation determined purposively. The data on organic pollution were analyzed descriptively based on saprobic index calculations, while the influence of several environmental parameters on saprobic index analyzed by multivariable statistical based on the Principal Component Analysis (PCA) program. The results show as much as 16 species of protozoa are identified, and the status of pollution in the mangrove ecosystem included in the Beta-Mesosaprobic category or medium polluted waters, while the environmental parameters that have a major influence on organic pollution waters of the mangrove ecosytem at Tidung Island are temperature, pH, turbidity and Biologycal Oxygen Demand (BOD)

Key word :
Mangrove, Organic Pollution, Tidung Island

Genetic of variance of Infant Chelonia mydas's mtDNA

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Abstract:--

Chelonia mydas were one of 6 turtle species in Indonesia which its population were decrease of illegal trade and hunting. Sea turtle conservation technique must supplied by molecular identification technique. This could be done with TCR Sequence Isolation from Chelonia mydas's mtDNA TCR Sequence is a non-coding control region in tRNA gene those faster in accumulate structural mutation and have sensitivity for population analysis. Abundant TCR Sequences could supplied by PCR optimizing with varying concentration titration of primer (0,25; 0,5; 0,1µM) and DNA template (25; 50ng), in 30 and 35 cycles. This research was conducted at Biology Laboratory of FMIPA UNJ and Biochemistry Laboratory of FKIK UIN-SH, from January to Juy 2006. Infant Chelonia mydas has being borne from eggs. Genomic DNA extraction from infant Chelonia mydas's flipper tissue were used as DNA template for TCR sequence isolation. TCR sequence from optimal titration PCR product were being detected at 0,5µM primer and 25ng DNA template in 35 cycles, by gel electrophoresis. A 383bp TCR sequence nucleotides were detected by sequencing method.

Keyword:

Chelonia mydas, mtDNA, genetic variance

Rapid Detection of Shigella flexneri on Egg Samples by the Real Time Polymerase Chain Reaction Method

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Abstract:--
Shigella flexneri is one of the foodborne pathogen bacteria that caused food poisoning. Detection methods that are sensitive, specific and fast are very necessary in dealing with food poisoning, among these methods is Real Time PCR (RT-PCR). This study aims to apply the RT-PCR method to detect and quantify the Shigella flexneri bacteria in egg samples with the ipaH target gene. The amplicon of the target gene from the amplification process is 188 base pairs. Confirmation test of the ipaH primers pair with DNA template in concentration of Shigella flexneri culture of ±50 ng/□L gave the value of Cycle threshold (Ct) ±12. Primers sensitivity evaluation in detecting target bacteria gives the results that up to the smallest concentration of 8.05 pg/□L with a Ct value of 24.939. Specificity testing shows that the ipaH primers pair can differentiate Shigella flexneri bacteria significantly with some non-target bacteria as negative controls. Quantification of the number of bacteria found in egg samples using the flow of line equations by the RT-PCR method of 15.85 x 10-5 CFU/mL. These results provide more sufficiently information compared to the culture method. Based on the results, it can be concluded that the RT-PCR method was successfully applied in detecting Shigella flexneri bacteria with the target ipaH gene in egg samples quickly, sensitive and specific as well as can determine the number of bacteria accurately.

Keyword:
ipaH primers, Real Time PCR, Shigella flexneri, egg sample.

Role Playing Learning in Early Childhood on Bhayangkari 29 Kindergarten Jambi through Phenomenology Approach

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Abstract:--

This research aim is to find out deeper informations dealt with role playing learning in early childhood, a phenomenology studies on Bhayangkari 29 Kindergarten in Jambi City. The data research collection has been collected through observing role playing in ways of interviews, observations, field documentations, and notes. The data validity testing techniques performed by levels of credibility, dependability, and certainty criterias. For the data analisys process includes; organize, sort, group, code, and categorize data base on data sources such as field notes, responses, and documentations. This research result find out that learning in early childhood with role playing method could help to improve the multiple intelligence and especially linguistic intelligence to the kids by doing role playing the children actively doing physical and non physical activities, get various vocabularies, sentences, and communication in dialogues, and also practice to write in creative ways. Because of that, this research recommendate the importance of role playing learning method for the early childhood students to improve the multiple intelligence and especially linguistic intelligence, so that children are able to face and solve various problems.

Keyword:

Role playing, Early Childhood, improvement, multipleintelligence, Phenomenology

Student Management Model in the Character Development: A Case Study in Laboratory School

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Abstract:--

The challenges of students' negative behavior have been facing by education system in Indonesia. Therefore, the character development become a key focused in current curricula. The laboratory school is a school model which is integrated with pedagogical university. The paper aims to explore students management model in the character Development. The study involved the participants of principal, teachers, parents and students . The research employed case study as a methodology with multiple data collection. The results show that the school has implemented several strategies of student management in the process of students admission, extracurricular. The school has integrated strategies of students leadership and involvement and making character education as integral part of education process. The character development has been succeeding to be implemented by collaboration and shared responsibility of principal, parents, and community. The laboratory school has developing comprehensive approach of emotional, intellectual, and moral development for the students.

Keywords:

Student Management, Charater Education, Laboratory School, Case Study

Analyzing and Recognizing Facial Patterns Using Local Binary Pattern and Data Compression

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Abstract:--
      In our current society, facial recognition is very important because of their use for a wide range of applications such as security, banking, surveillance and multimedia equipment like cameras. Facial Recognition is a software application for detecting and identifying a person in a digital image and videos. It is important to recognize a person's identity for security purposes and it could also be used to faster access any type of records solely identifying identity and historical background.

The researchers have utilized the Local Binary Pattern and Data Compression which are among the easier solutions to improve facial recognition. Local Binary Pattern is a simple and very effective visual operator in computer vision including facial recognition. LBP has become popular in most of the applications. In real world applications, the most important property of Local Binary Pattern is its robustness to monotonic gray scale changes caused and its computational simplicity. Another solution is Data Compression which is the process of inputting all the information's into a less storage space in a file. Data Compression is very important for computing and it is mostly used by many applications.

Keywords:
 Facial Patterns, Local Binary Pattern, Data Compression

Analyzing the Efficiency and Effectiveness of Implementing Singly Link Lists On Web Browser History and Operating System Processes: A Basis for Standard Evaluation

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Abstract:--

In a web browser history and operating system processes, a linked lists is really important. It is being implemented for the purpose of keeping track of the running and sleeping processes in an operating system, chaining to resolve hash collisions, or simply fetching the history section of web browsers. This research presents thorough study about the efficiency and effectiveness of singly linked lists implemented on some system processes such as memory allocation, process scheduling, hashing, stacks and queues, and manipulation of each specific node.

Singly linked list, as part of data structure, becomes very useful in creating real programs, pointer manipulation, and a combination of algorithms. In much simpler explanation, a singly linked lists is a chain that connects all linked lists elements or nodes using pointers and allocates space within a specific own block of memory.

The researchers finally had drawn conclusions that a singly linked list consumes less memory requirements than any other data structure components such as array, doubly linked lists, etc. Yet to be persistent, it only needs to keep forward pointer or referencing in place. Implementation of singly linked list in most web browser and operating system processes is somewhat arguable. If there are some constraints regarding the use and implementation of singly linked list, then the web browsers and operating system will be responsible for memory block, history, and data allocation.

Keywords:
Efficiency, Effectiveness, Singly Link List, Web Browser, System Processes, Operating System, Standard Evaluation

Talent Management Strategy of Employee Engagement

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Abstract:--
        The objective of this study is to find talent management strategies in order to increase employee engagement for employees from the talent pool. The qualitative approach of case studies is conducted through observation, interviews, group discussions, and documentation. It is also used by the researchers in obtaining the data from 22 interviewees at one of the general insurance companies in Indonesia. The results of the study indicates a two-stage monitoring strategy model to increase employee engagement for employees from the talent pool. In each stage includes strategies for talent acquisition, talent development, and talent retention. The first stage of talent management is obtained when the employee has a 1.5-year work period, while the second stage is obtained when the employee has a 2.5-year work period. Theoretically, the results of this study can be used to reinforce the findings of talent management strategies, especially its influence towards employee engagement. Practically, the results of this study are useful for human resources practitioners to obtain guidance in increasing employee engagement for employees from the talent pool.

Keywords:
Employee Engagement, Talent Management, Talent Pool

The Relationship between Instructional Leadership, Locus of Control, And Personality with Citizenship Behavior

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Yufiarti , Universitas Negeri Jakarta

Abstract:--

The purpose of this study was to find out information about the relationship between instructional leadership, locus of control, and personality with citizenship behavior in students. This research is a quantitative study with a correlational method involving a sample of 103 students in DKI Jakarta Public High School 8. There are four instruments used in this study, namely: (1) citizenship behavior (r = 0.938); (2) Instructional leadership (r = 0.980); (3) Locus of control (r = 0.909); and (4) Personality (r = 0.939). The results of the study show that 1) there is a positive relationship between instructional leadership and citizenship behavior; 2) there is a positive relationship between locus of control and citizenship behavior; 3) there is a positive relationship between personality and citizenship behavior; and 4) there is a positive relationship between instructional leadership, locus of control, and personality with citizenship behavior together. Therefore, if we want to improve citizenship behavior in student, then these three variables need to be considered.

Keywords:

citizenship behavior, instructional leadership, locus of control, personality

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Influence Management Effectiveness, Academic Culture and Lecturer Integrity toward Lecturer's Commitment in Improving the Quality of Learning at Bani Saleh Foundation College

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Abstract:--
  This study aimed to determine the influence of management effectiveness, integrity of lecturer, academic culture toward lecturer's commitment in improving the quality of learning either partially or simultaneously. Research approach used in this study is a quantitative approach. The study population was all lecturers at the School of Bani Saleh Bekasi totaling 272 with 100 respondents in the sample. The sampling method is the population of professors who have the qualities and characteristic of educational strata S2 minimal lecturer, has taught at least 3 years, not a lecturer PNS placed in the foundations, and have academic rank expert assistant to associate professor. The research data was collected through questionnaires designed in the form of Likert scale and rating scale. The test results and analysis conducted states; There are positive direct influence on the integrity of the management effectiveness of lecturers, there is a positive direct influence on the integrity of academic culture lecturer, there is a direct positive influence on the management effectiveness of academic culture Bani Saleh College Foundation. Simultaneously the effectiveness of management, academic culture and integrity lecturer positive direct influence on faculty commitment in improving the quality of learning.

Keywords :
  Management effectiveness, integrity faculty, academic culture, committed faculty, the quality of learning

Regional Autonomy in West Kalimantan: Implementation and Challenges towards Education Development

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Abstract:--

Regional autonomy means transfering of authority and functions from central to regional government and to improve people's welfare as the objectives. Focus research evaluation directed at the implementation of regional autonomy policies has resulted particularly towards education development. The study was conducted with a qualitative approach and using CIPP model evaluation method. The results of the study show: (1) the context of policies, objectives and decentralization in developing the potential of educational institutions in West Kalimantan Province is still constrained by the alignment of understanding of the vision and mission of education development; (2) inputs in the form of resources (human, funds, and facilities) have been sufficient in the development of education in West Kalimantan; (3) the education process carried out in West Kalimantan seeks to address strategic issues that weaken human resource development through education. However, in its implementation, the process carried out is still not paying attention to aspects of educational planning; (4) educational products in the era of regional autonomy have not shown satisfactory results. This can be seen in 2017 West Kalimantan Human Development Index (HDI) is 66,26 sufficiently at moderate level.

Keywords:

evaluation, policy implementation, regional autonomy, education

The Effect of Adversity Quotient and Gender to Learning Outcome of High School Students

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Abstract:--
         Adversity Quotient is intelligence possessed by someone in facing difficulties and obstacles in order to overcome. Three type of AQ is quitters, campers, and climbers. Difference of physiology and psychological between male and female students effected to their learning outcome. The research was aimed to know the effect of adversity quotient and gender to learning outcome of high school students on Plantae. This research was conducted in SMA Negeri 1 Cibinong using 114 students taken by simple random sampling. The method used was ex post facto 3 x 2 factorial design. Data was collected using the instrument of adversity quotient and learning outcome. Data was in a   normal distribution and in a homogeneous variance. The results showed that 1) there was a significant difference between the average of student's learning outcome on type quitters, campers, and climbers. Learning outcome of climbers were higher than campers and quitters. 2) There was a significant difference between in the average student's learning outcome between male and female students. Learning outcome of female students were higher than male students. 3) There was no interaction between Adversity Quotient and Gender to student's learning outcome on plantae material.

Keywords:
         Campers, Climbers, Female, Male, Quitters

The Academic Use of Smartphone in English Classes

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Abstract:--
Ample researches about smartphone use problems have been conducted for years recently. Despite it, however, researches of academic use of smartphone is limited, particularly related to English classes in Indonesian context. This research was conducted to scrutinize how teachers of English take benefits of the smartphone use in the delivery of both teaching and testing activities. Sample comprised 129 teachers derived from three school clusters in the greater city of Jakarta, i.e., Junior Secondary, General Senior Secondary, and Vocational Senior Secondary schools. To confirm it, data of student's practice of the smartphone use to learn English was also scrutinized. For that purpose, diverse students from the three school clusters were also involved. The research reveals the findings, such as (1) all teachers are familiar with the features and application available in the smartphone, (2) all teachers utilize the available application to blend the delivery of teaching activities, but kinds and numbers of the application vary, (3) reading is the most preferred skills to deliver using smartphone, (4) almost all teachers utilize the available application to assess student's learning achievement, and google application is the most preferred choice, (5) in addition to teaching and testing, all teachers utilize smartphone to motivate students to learn English, but kinds of application vary. This research implies that blended teaching is obligatory in the millennial age nowadays.

Keywords:
Smartphone Use, Teaching English

The Role of Education on Gender Equality Related to Knowledge about Ecosystem, Locus of Control and Students' New Environmental Paradigm (NEP): A Comparative Analysis

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Abstract:--

This research was aimed at finding out the information concern with the role of education on students' gender related to knowledge about ecosystem, internal-external self-control (LOC) and New Environmental Paradigm (NEP). An Ex post facto method used on this study by involving 362 students from Makasar, Palembang and Jakarta.. There were three instruments developed to measure students' NEP (62 items, reliability/rel. 0.87), knowledge (17 items, rel. 0.72), and LOC (17 items, rel. 0.63). Data analyzed by t-test and confirmatory factor analysis. Research results revealed that there was no significant effect of gender on students related to knowledge about ecosystem, LOC and students' NEP. Except for students from Palembang, found that there was significant effect of gender on students' knowledge about ecosystem. The average of male students' knowledge was differ between male and female students. Generally, however, these findings depicted that Education has a vital role in determining similarity among those variables involved based on gender equality. Even though students stay in different cities background, their knowledge about ecosystem, LOC and NEP based on gender have a similarity due to educational system. Based on factor analysis, female students' NEP has higher internal consistency than male students in term of its factor loading and number of factors omitted. It is argued that female student has wider ecological view and more sensitive in responding the environmental issues, where none of research, so far, reported about this case.

Keywords:

Confirmatory Factor Analysis, Gender Equality, Locus of Control (LOC), New Environmental Paradigm (NEP).

A Computer Created Experience of Noli Me Tangere (Touch Me Not) using Virtual Reality: An Educational Perspective

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Abstract:--

Immersive experience changes the way of teaching and learning. It transforms education in more engaging and interactive in a premise of computer-created environment to introduce a concept of storytelling. The adaptation of virtual reality in story telling explores space wherein the learners can interact with. This makes us to bound to an object to better remember the details. Virtual Reality (VR) in education promotes hands-on learning techniques that brings the learners the life-like engagement that increased the level of cognitive memory by stimulating the real-world environments. Exploration makes the tasks retain the information through remembering the details.

The purpose of this study is to develop a 360 experience of game-based application of Noli Me Tangere (Touch me not) using Virtual Reality (VR). Noli me Tangere or "Touch me Not", a literary masterpiece written by Dr. Jose Rizal, one of the national heroes of the Philippines. This novel is credited as the sparking flame of Philippine revolution during the Spanish Era. The captivating effects of virtual game of Noli come the individual interaction without taking much time to read as it retains the information. Learners immerse in space and bound with the object that is related to the story.

The researchers adopt the Reality User Interface-based (RUI-based) applications to generate virtual entities. The learning is carried out by engaging into the space of the game. It can be a repeating process to master every level. After the interaction the learning is completed. The method is applied like storytelling in an interactive way. The results show the confidence level of the student to understand the learnings is high and faster than the traditional way.

Devata Warriors: A Mobile Game-Based Filipino Mythical Riddle

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Irish Junne E. Corillo, Philippines
Hanna Barbera D. Asis, Philippines
Crystal Joyce C. Tagle, Philippines

Abstract:--
       Mobile game-based learning has been gaining attention for being widely used of mobile devices. As time passes and mobile technology advances, traditional games like "bugtungan" or Filipino riddle, is slowly forgotten in the present generation. This game shows the unspoken culture of our ancestors. Acknowledging one's culture by exploring its unique arts and origins is greatly attributed to mirror one's identity. It is like knowing your origin.

The proponents develop a mobile game-based for Filipino Mythical character and riddle to bring back the unsung story and riddle of Filipino. The mobile game influences the learner's performance by terminology acquisition made. A set of riddles provide to answer and demonstrate to aggregate data on Filipino mythical creatures. The learner will encounter the Filipino Mythical creatures while exploring the space. With the use of the game board results, the idea to make the game better and solve puzzle stated above was strengthened. The proponents provide the survey for 100 respondents.

The pre-survey carried out before the participants started using the app and post-survey were completed to identify the confidence level the participants in learning the mythical creatures and riddles. Results showed from pre-survey respondents aged ten to twelve are not familiar with the traditional riddle game and the Filipino mythical creatures. This study reveals with the use of mobile game-based application of Devata Warrior: A Mobile Filipino Riddle Game, the post-survey results display the improvement and show the positive learning performance. The confidence level is high that gives impact for the new generation of the Filipino to respect and love the Filipino tradition by experiencing, exploring, and knowing their culture.

The Effect of Supervision, Self Efficacy and Work Commitment with Professionality of Teacher
(Survei at Junior High School in East Jakarta)

Muhammad Dimyati, Science Program Management, Human Resource Management, Universitas Negeri Jakarta

Abstract:--

The objective of the study is to find out the effect of supervision, self efficacy, and work commitment to the professionality of teacher. Survey was applied in this study which data have been analyzed by path analysis after all variables put into correlation matrix. In this research, the school principals have been chosen as a unit analysis and 82 samples selected randomly.The result of the study finds out that the professionality of teacher is effected directly by supervision, self efficacy, and work commitment. It also found that professionality of teacher is effected indirectly by supervision and self efficacy as well, both through work commitment.

Based on those findings, it could be concluded that variation which occurred at professionality of teacher might have been effected by the variations of supervision, self efficacy, and work commitment.

Keyword :

variations of supervision, self efficacy, professionality of teacher, and work commitment.

The Effect on Adversity Quotient (AQ) and Compensation over Turnover Intension

Endang Kartika Wahyuningsih

Abstract:--

From 2007/2008 Global Strategic Rewards survey conducted by Watson Wyatt showed that it is certainly needs more cautious for any businessmen to lose their higher achievement employees and staffs with special expertises, therefore, the company shall provides certain working stimulants for their employees, for example fair, decent and assured wages, and it will urge their employees to work according to the company's needs, another importance measure is by strengthening their Adversity Quotient. An individual who procures better Adversity Quotient (AQ), they shall not easily blame others on their own problems/issues, instead, they will take its responsibility to settle certain problems/issues. They will not easily complaining or discouraged due to any worst situations. In contrary, they are capable to swiftly think, act and settle for going forward with their limitedness(s).

Keywords :

Adversity Quotient (AQ), Compensation, Turnover Intension.

Trend Community Healthcare Analysis: A Predictive Approach

Flordeliza R. Fernandez

Abstract:--
  Health care is one of the primary concerns of the government. In this study the researcher will focus on the smallest type of government in the Philippines. The barangay comes from the word "balangay" is the smallest form of government that headed by the Chairman and councilors. Each barangay has its own public health center administered by the health workers hold all the medical records, consultation and medication. This research project trend analysis model to identify the possible breakout that will happen in the community. This approach forecast can help the policy maker to create benchmark of making projections in terms on planning and decision making in the future. The trend analysis illustrate how time and algorithm will affect prediction of the healthcare sector.

The Impact of Remuneration, Work Mutation and Career Development towards Employee Performance in Kpp Pratama Sidoarjo Selatan

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Abstract:--
       This research aims to know the impact of remuneration, mutation and career development towards employee performance in KPP Pratama South Sidoarjo. The used respondent is 92 employees of KPP Pratama Sidoarjo Selatan. The approach of this research is quantitative approach by using hypothesis testing which has the quality of causality. This research is included in confirmatory and explanatory research. The sampling method that is used in this research is census method where the entire population with total of 92 individuals is the sample through data collecting method by using questionnaire. The result indicates that (1) remuneration has significant impact on KPP Pratama Sidoarjo Selatan employee's performance (2) mutation has no significant impact on on KPP Pratama Sidoarjo Selatan employee's performance (3) career development has no significant impact on on KPP Pratama Sidoarjo Selatan employee's performance

Keyword :
       Career development, Mutation, Remuneration, Performance.

Business Strategy Based on Quantitative Strategic Planning Matrix on Golf Courses in Surabaya

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Abstract:--
    The concept of business competition in an industry of goods and services is very important, especially in the golf course business in Surabaya. There are only 3 international standard golf courses, namely Bukit Darmo Golf, Graha Family, and Ciputra Golf in Surabaya. From these three golf courses, it was known that there was a decrease in the number of golfers who played on the golf course in Surabaya for the period 2013 to 2017. The SPACE and QSPM matrices were used to analyze what positions and strategies needed to be applied by golf course managers to increase the number of golfer visits, namely by using a factor - internal and external factors of the company.

Keyword :
    golf course, SPACE Matrix, QSPM

The Effect of Using Social Media to Enterpreneurial Interest in Airlangga University Students:
Case in Management Students at Faculty of Economic and Business.

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Abstract:--

The presence of the internet has given in a revolutionary change in the way of everyday life and human activity. Through the internet, everyone can access to the globalized world to obtain various information they need in all her daily needs. Amid rampant internet users from year to year, more businesses that have been pioneered through social media. The purpose of this research is to find out the influence of social media usage to entrepreneurial interest in Management student at Faculty of Economic and Business Airlangga University. This research uses a quantitative approach. The population in this research is university students of Economic and Business faculty. The sample are 160 respondents conducted by purposive sampling technique. The data was collected by questionnaires. Statistic descriptive was used to analyze the data. The results showed a significant degree of influence between the use of social media to the entrepreneurial interest with value of tcount as 6,494 and the signification of value are 0,000. The using of social media gives influence of 21.1% on the entrepreneurial interest and this includes the low category

Keyword :

Social Media , Entrepreneurial Interest

Accessibility, UX Metrics and Gamification Approach in Embedded System

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Abstract:--
      Embedded systems are developed to help people living a better live. Gamification approach in the system can also become the tool for people living their precious life. These system requires friendly interface to help people able to use the system properly, especially disabled people. Better system experience and ease of use are among the parameters which are important but difficult to measure. In this work we also propose simple way to measure UX metrics based on the time needed to be able to access and properly use the system. User is given the blind test for new interface and the elapsed time is measured as the parameter for understandability. The faster the user understands the system interface the better the UX UI score. Many smart cities policies also considering many applications that are specially developed for impaired people. However not many 'ordinary' embedded system that being developed with the consideration that their user might be having some degrees of disability or impaired. Small changes in design which require only little effort, like adding 'beep', could improve the user experience aspects especially for disabled user. Gamification can also trigger the people to interact more with the system.

Keyword :
      Gamification, Metrics, User Experience, User Interface.

Change Management of Islamic Boarding Schools
(Phenomenology Study at the Sumatra Thawalib Parabek Islamic Boarding School Bukitinggi)

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Bedjo Sujanto, State University of Jakarta
Makruf Akbar, State University of Jakarta

Abstract:--
 This research study is the change management of the Thawalib Parabek Islamic Boarding School in the aspect of organizational culture using a qualitative approach and phenomenology methods. Data collection through interviews, observation, documentation studies. Data is analyzed by reducing, coding, categories and setting themes. The validity of the data is tested through triangulation. The results of the study illustrate that the management of organizational culture changes that occurred at the Sumatra Islamic Boarding School Thawalib Parabek with regard to the culture of taqwa, himmah, ahlul ilmi wal worship, wara ', amanah, lein, istiqamah and birrun.

Keyword :
 change management and organizational culture

Determinants of Lecturers' Performance in the State Polytechnic of Jakarta

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Wibowo, Universitas Prof Dr Moestopo

Abstract:--
This research is aimed at finding out and discovering determinants of lecturers' performance. This research analyzed how emotional intelligence, organization climate and job satisfaction affect lecturers performances in the State Polytechnic of Jakarta. This quantitave research was conducted using a survey method. Path Analysis was used for the purpose of data analysis. The population of the research was all permanent lecturers of the State Polytechnic of Jakarta (325 people) with a sampling of 77 respondents. The result of the research revealed that emotional intelligence has a significant effect on the lecturers' performance. Furthermore, job satisfaction also affected the lecturers' performances in the same way.

Keyword :
Leccturer's performance, emotional intelligence, organization climate, job satisfaction