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International Journal of Engineering and Advanced Technology Open Access Volume 9, Issue 1, October 2019, Pages 143-151

Contextualizing local values of children "s games in the perspective of ecopragmatics to enhance culture-specific based communication (Article) (Open Access)

Rahardi, R.K. 쩝, Setyaningsih, Y. 쩝 ္

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Abstract

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This research focuses on the contextualization and preservation of the diminishing local values which are slowly abandoned by the young generation. The data consists of texts containing local values or presumed to contain values collected by the researchers. The data was gathered by observing the texts describing traditional children 's games during the timeline of research. The technique to implement the observation method was recording and note-taking. Besides, interview or speaking method was employed to gather the data. Interview was conducted to experts who understood the values of local wisdom contained in the traditional children 's games . The data analysis was done using the distributional and content analysis methods. The result of the analysis shows that the values of local wisdom contained in the traditional children 's games of: (1) Affection; (2) Agility and Fighting Spirit; (3) Creativity and Adaptability; (4) Creative Imagination; (5) Acceptance of the Facts of Life; (6) Fulfilling the Destiny; (7) Obedience and Discipline; (8) Intelligence Test; (9) Synergy and Collaboration. These values and wisdoms were found in the following games : (a) Dedek-Dedekan, (b) Rerodaan, (c) Bentik, (d) Topeng-Topengan, (e) Boneka Kodokan, (f) Kitiran Umbul, (g) Masak-Masakan, (h) Polisi-Polisian, (i) Mekrok, (j) Dingklik Oglak-Aglik. © BEIESP.

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The linguistic textbooks during his doctorate tenure are: Pragmatik: Kesantunan Imperatif dalam Bahasa Indonesia (Erlangga Publisher Jakarta, 2006), Asyik Berbahasa Jurnalistik: Kalimat Jurnalistik dan Temali Masalahnya (Santusta Publisher Yogyakarta, 2006), Paragraf Jurnalistik: Menyusun Alinea Bernilai Rasa dalam Bahasa Laras Media (Santusta Publisher Yogyakarta, 2006), Dasar-dasar Bahasa Penyuntingan Media [Gramata Publisher Jakarta, 2009], Penyuntingan Bahasa Indonesia untuk Karang-mengarang [Erlangga Publisher Jakarta, 2009], Menulis Artikel Opini dan Kolom di Media Massa (Erlangga Publisher Jakarta, 2012), Fonologi dalam Bahasa Indonesia (Universitas Sanata Dharma Press,

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Authors:	Hemlata Pal, Abhay Kumar					
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Authors:	Elmer B. Dollera, Mark Chester F. Rey, Anjo R. De Jesus, Jiah M. Piloton, Rico R. Salem, Jr.					
Paper Title	Water Desalination System using Parabolic Trough with Varving Glass Thickness					
- upor ritio.						

2. Abstract: Three quarters of the earth's surface is covered with water[1]. Based on a survey, with the world's population growing every year, the supply of usable water is not keeping enough with the required amount of water needed for survival. Nowadays, clean water has become a business which produces constraints when it comes to accessibility. Here in the Philippines, there are various diseases every year which relates to unsafe drinking water which may sometimes lead to death. The researchers want to know the effectivity of the assessed solar desalination

system, how much desalinated water could this system provide and how long does it take for this amount to be produced in a given day. This study uses a parabolic trough which is the main means of harnessing solar energy and transferring this energy to the saltwater container which will heat up the pre-specified amount of saline water. The vapor will evaporate and the condensate will be trapped in the glass lid and routed to a desalinated water container. An evaluation is made to know the effective glass thickness for the device, the 3mm, 6mm and 10 mm thickness has been assessed and after the testing phase, it has been found out that the 10 mm glass thickness produced the optimum results. It is able to produce a liter of desalinated water out of 5000 mL of saline water. It is then observed that the 10mm glass thickness has the highest volume conversion efficiency of 23.10 %, followed by the 6mm glass thickness of 21.90% and the 3mm glass thickness of 17.30%.

Keywords: condensation, desalination, glass thickness, seawater, solar desalination system

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Authors: Ridha Muldina Negara, Rohmat Tulloh, Nandy Hadiansyah P.N, Rizka Triani Zahra

Paper Title: My Locker : Loaning Locker System Based on QR Code

Abstract: Locker is a place that people usually use to keep things. Commonly, lockers are found in campus hall, tourist site, or other public places. Lockers that we face in a daily activities usually still using a conventional keys that we can't guarantee the security of it. The focus of this research is on online locker rental system that can be accessed through android smartphone and MyLocker application by scanning the QR code. Within this system, occurred website that can be used to see the filled locker or the unfilled locker and there's admin page, to see the summary of data user and the agreement of top up request. The devices component that we used are NodeMCU, Relay, solenoid door lock and magnetic door switch. From the result of the test that done by system worked so well and delayed that we achieved while we did the QR code reading experiment with of lux, gap, and gradient slope with optimal condition is 1.45 seconds.

Keywords: E-Locker, Microcontroller, NodeMCU, QR-Code, Website, Android.

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Authors:R. Lalitha, J. Jebamalar TamilselviPaper Title:Neuron Connectivity and Thickness Analysis of Brain for Autism Spectrum Disorder to Improve Speed and
Accuracy.

Abstract: Neuronal Connectivity is learning from the intelligence to enhance the knowledge of our computing devices, certain, namely recognition, locomotion, or objective recognition. Such synthetic neural networks have at last being used after understood patterns on talent recreation between Amygdala imaging Scientists studied the talent for 150 years, trying to link the intelligence along behavior. Such studies have old strategies beyond microscopes according to inserting genes within existing cells. This paper interface device, such so cochlear implants then implanted electrodes according to allow Amygdala Images according to pace devices outside perform repair lost applications to individuals. Neurons firing round 5 in imitation of 50 instances a second speed Signals in a tent about a second regular neuron makes 10000 connections including 5000 trillion synapses. The reliability propriety over susen algorithms that new method 3D pose estimation in Drosophila the usage on accuracy with speed ratio then statistics dividing in accordance with permit counterpart throughout analysis NIAK for UCI Dataset Autism Screening Adult(ASA) better rate of accuracy 95.41% and speed 91.72%.

Keywords: Neuron; NIAK; ASA; Speed; Accuracy; Drosophila; Susen algorithms.

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Authors:	M. Manoj Kumar, V. Srinivasa Reddy, M. V. Seshagiri Rao, S. Shrihari
Paper Title:	Flexural Capacity of Concrete Beams Reinforced with Basalt Fibre Rebars

Abstract: An effort to find an alternative for conventional steel in concrete by researchers leads to study the behaviour of basalt fibre reinforced polymer (BFRP) bars in concrete. In the present study the flexural behaviour of basalt fibre reinforced polymerconcrete beams. The tension test on BFRP bars demonstrated that BFRP bars have nearly three times high tensile strength, low modulus of elasticity of nearly one-fourth of conventional steel bars and also the stress-strain behaviour is linearwithout any yield point up to failure. In the present study, flexural behaviour of concrete beams reinforced with BFRP rebars comparing with reference beams made with conventional steel reinforcement. Load carrying capacity, deflection at mid-span and mode of cracking is observed. The beam with flexural BFRP reinforcement has load capacity of 46.7 kN whereas for beam with steel rebars has flexural load capacity of 37.6 kN. Deflections of BFRP reinforced concrete beams at midspan during failure is 14mm considerably more than the steel reinforced beam deflection which is 5.6mm, due to much lower modulus of elasticity of BFRP rebars when compared to steel rebars. Average width of cracks at failure in BFRP concrete beams nearly 4 times higher than in the reference steel concrete beams.

20-25

Keywords: Index terms: BFRP, Basalt fibres, FRP, high tensile strength, flexural capacity

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Authors:	Jeetendra Pande, Alka Singh, Kamolrat Intaratat, G Mythili
Paper Title:	Sharing, Adaptation and Organization of Open Educational Resources: Exploring the Teachers' Attitude of Sukhothai Thamathirat Open University, Thailand

Abstract: The Open Educational Resource(OER) is based on culture of sharing and learning, encouraging the teachers to adopt existing OER, adapt and share with others to keep up the cycle of collaboration and continuous improvement. Understanding teachers' attitude towards the use of OER and comparing data across institutions may help to recognize the issues that impact OER take-up. The major objectives of the paper is to study the teacher's attitude towards OER at Sukhothai Thamathirat Open University(STOU), Thailand. The teachers' attitude towards OER scale with a five-point scale from strongly disagree to strongly agree was used in this study. Based on the scale, adaptation & use of OER and sharing of OER can be identified. The questionnaire was distributed to the faculty of STOU. There were 32 respondents of STOU considered for analysis. Data captured through online form. The data have been analyzed quantitatively by implying statistical measures. The frequency measures were used to present the demographic as well as other data along with chi-square test. The analysis was done in SPSS. Teachers of Thailand are encouraged to share OER for their professional enhancement and personal satisfaction. It is interesting to find that majority of them are motivated to share and contribute to OER for dissemination of ideas in a knowledge society.

Keywords: Open Educational Resources (OER), Attitude, Adaptation, Sharing resources.

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Authors:P N Sidhartha, S. Muthubalaji, G DevadasPaper Title:Fuzzy Pi Controller Based Single Phase Hybrid Inverter for Domestic Applications

Abstract: This project proposes a topology for Fuzzy PI controller based single-phase Hybrid solar photovoltaic (PV) inverter with for Domestic applications. The proposed Hybrid power converter consists of a PV cells, MPPT algorithm, switched mode buck boost converter in the DC side, battery bank and a single phase bridge inverter. The Control strategy of the inverter gate pulses are done by the sampling of sinusoidal pulse width modulation (SPWM) with a square wave which is controlled by Fuzzy and PI combined controller, along with grid synchronization condition. The performance of the proposed inverter is simulated under grid-connected scenario and load disturbances. The output of PV module system is enhanced by the maximum power point tracking (MPPT) technique using P & O algorithm in order to increase the systems efficiency. This system is more useful for the households as it has both power storing and saving applications.

Keywords: Fuzzy PI controller, Photovoltaic system, Renewable energy, Sinusoidal pulse width modulation (SPWM).

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Authors:Chaitanya Kommu, A Daisy RaniPaper Title:The Mixed Logic Style based Low Power and High Speed 3-2 Compressor for ASIC designs at 32nm
Technology

Abstract: Compressors are the fundamental building blocks to construct Data Processing arithmetic units. A novel 3-2 Compressor is presented in this paper which is designed by Mixed logic design style. In addition to small size transistors and reduced transistor activity compared to conventional CMOS (Complementary Metal Oxide Semiconductor) gates, it provides the priority between the High logic and Low logic for the computation of the output. Various logic topologies are used to design the 3-2 compressor like High-Skew(Hi-Skew), Low-Skew(Li-Skew), TGL (Transmission Gate Logic) and DVL (Dual value Logic). This new approach gives the better operating speed, low

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power consumption compared to conventional logic design by reducing the transistors activity, improving the driving capability and reduced input capacitance with skew gates. Especially the Mixed logic style-3 provides 92.39% average power consumption and Propagation Delay of 99.59% at 0.8v. The H-SPICE simulation tool is used for construction and evaluation of compressor logic at different voltages. 32nm model file is used for MOS transistors.

Keywords: Low power CMOS, pass transistors, skew gates Transmission gate.

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Authors: Amit Sinha, Dharmesh Kumar Niranjan, Alka Singh

Paper Title: Free & Open Source Software (FOSS) in Website Designing

Abstract: People want website to be fast, user-friendly, secure & free to use. Web sites have become a critical part of business, and the tools to create and deploy Web sites are becoming more flexible and easier to use. This paper talks about the role of FOSS in Website Designing. FOSS proves to be a boon for website developers in the way that they are secure, robust and free to use & modify. The open source tools available in the market facilitate the tool -box of a website developer. The use of FOSS increases the productivity, provide a secure Environment & also save a website developer of getting screwed under the copyright act. This paper talks about the technologies which FOSS world currently offers to the website developers and also the revolution which is awaiting to flourish the market. It also incorporates a study of the recent developments & the way market is becoming more dependent on FOSS. For example, PHP is the basic element of the most famous social networking website today, the Facebook. Also, GMAIL is entirely based on the open source language, Python.

Keywords: Free & Open Source Software, Website Designing, Open Source, GNU Public License

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Authors: S. R. Pranav Sai, Ajay Singh Pawar, Satya Sai Mudigonda, Pallav Kumar Baruah **Paper Title:** Application of High-Performance Computing for Calculating Reserves using the Cape Cod Method Abstract: Calculation of reserves is one significant step in the strategic perspective for an insurance company. This is done on a periodic manner in order to have a better understanding regarding the future liabilities of the company. The time required for these calculations will grow quadratically as the size of the input increases. These computations are done several times by taking different factors in view. Thus, these computations become costly with regard to time. One of the many actuarial techniques for calculating reserves namely the Cape Cod method was used to calculate the reserves. HPC was applied for the same in order to reduce the time required to calculate a company's reserves. We applied HPC to calculate Projected Ultimate Claims based on Cape Cod method. Method takes year wise input of reported claims, incurred claims and earned premiums and outputs Projected Ultimate claims for each year. Making use of the independence which exists in computation of output across years, we parallelized the computations across years. The parallelization strategy proposed gives the speed up to 66194X compared to the serial implementation of the same. Keywords: Reserves, Insurance, Development triangle, Cape Cod method, Actuarial analysis, Development year, Accident year, Claims incurred, Claims pair, GPU, CUDA. 10. 54-57 **References:** Hans Waszink, Waszink, **Considerations** Discount 1. on the Method Risk Rate in the Cost of Capital for the Margin, www.actuaries.org/ASTIN/Colloquia, 2013. Teja 2. J Bhanu Pallav Kumar Baruah Satya Mudigonda Sai , and Phani Krishna Kandala, Application of High Performance Computing for Calculation of Reserves for a Company, International Journal of Scientific and Engineering Research Volume 9,2018.0 3. 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Yuvaraj **Paper Title:** A Fuzzy Logic Based Controller for the Bidirectional Converter in an Electric Vehicle Many technologies are focusing on the Electric Vehicles to grow in a big way to reduce the oil Abstract : consumption and the carbon emmissions levels across all over the world in the near future. However there are many hindrance factors like the price of Li-ion batteries, charging infrastructure and charging methods are affecting the growth of EV's. Understanding these issues, a two stage basic converter popularly known as Bidirectional DC-DC converter is proposed for Grid-2-Vehicle, Vehicle-2-Grid, Vehicle-2-Home applications and leads to the efficient Energy Management Systems. The Bidirectional Converter uses an independent control using Fuzzy logic controller at each mode of power conversion stage. By using this unique feature, the Electrical Vehicle battery able to work in charging mode and discharging mode efficiently. In addition, this converter uses less number of components, with good operating efficiencies and most economical. The entire system has been developed using MATLAB-Simulink software. Keywords: Bidirectional Converter, ANFIS controller, Electric Vehicle 11. **References:** U. A. Shaikh and M. K. AlGhamdi and H. A. AlZaher, Novel product ANFIS-PID hybrid controller for Buck converters, The Journal of 1. 58-62 Engineering, 2018, volume: 2018, pages: 730-734, ISSN: 2051-3305. B. M. Reddy and P. Samuel, 2016 "A comparative analysis of non-isolated bi-directional dc-dc converters", IEEE 1st International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), year:2016. K. Saichand and V. John"PWM Block Method for Control of an Ultracapacitor-Based Bidirectional DC-DC Backup System", , IEEE 2. Transactions on Industry Applications, 2016, volume: 52, pages: 4126-4134, ISSN: 0093-9994. 3. 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Authors: Hardik I. Patel, Chirag Patel, Arpit Trivedi

Paper Title: Assessment of Affecting Factors for Higher Education Admission Process

Abstract: Education is the most important aspect of human life. Today, many streams are available to study. It has created a huge opportunity for a student to enroll in any course by fulfilling definite criteria. The courses are managed by various institutes, which are affiliated with particular University. In some courses, students have the choice to enroll without fulfilling any academic criteria. Some students are choosy in joining particular institute or course. Their choice for University or Institute depends upon specific parameters they might have predefined. In this paper, we have studied various parameters, which can influence the decision of a student to take admission in a particular course or institute. To extract essential parameters, we have conducted a survey among students who are studying in different courses and institutes. It is observed from the survey that Job Placement and Good Teaching are very effective parameters in influencing student admission decision-making process. It also reveals that sometimes, the institute is not important when a student is interested in a particular course. This research also guides the institutes or Universities to work upon such parameters to increase the enrollment of students in different courses. To validate this research, the survey from 208 students representing different institutes of India, is collected and analyzed. After analyzing the data collected from the survey, the influential parameters are decided. A graph-based approach is applied to identify the relationship between the varieties of parameters. The results obtained from the graph justify that individual parameters do not affect at large scale in student admission decision-making process while the association of multiple parameters may influence their admission decision-making process.

12.

Keywords: Parameters, Admission, Course, Subject, Institute, Student

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Authors:	Vinod. D, Sivanesh Kumar. A. Saritha arumugam Manickam Muruganantham
Paper Title:	A Framework and Assessment of Information Security in the Product Design Centre: A Quantifiable Analysis on Information Flow

13. Abstract: The present investigation aims to propose an information security system for an item configuration focus of a globally presumed car industry. As the essential commitment of this examination consider, the different arrangements for the verified data stream inside and outside the improvement focus alongside different kinds of assaults are talked about in order to upgrade the general security of the data framework at the middle. A layered compositional model for the data security of the inside is considered to beat the dangers. The security arrangements and instruments are talked about in the entrance control level as well as in accomplishing verified data correspondence level between the various

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substances The proposed model represents the verified data trade in the trust and protection points of view concerning time and setting of trades in a particular structure, which isn't found in existing proficient measures or scholarly productions. To support the feasibility of this approach and solicitation of these devices to true situations, for instance uncovered a few perilous states in a plan focus data framework approach and distinguished secret data streams in an entrance control arrangement for an enormous server framework.

Keywords: Product Design Centre; Layered Architecture; Access Control Matrix.

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Authors:Vinothkumar. C, Marshiana. D, Ramadevi. R, Krishnamoorthy. N. RPaper Title:Design and Control of Nonlinear Hybrid Tank Process using Conventional Controllers in Petrochemical
Industries

Abstract: In this paper the plan of customary controllers, which can be utilized for the control of non-straight frameworks to give an ideal degree of a nonlinear tank. The non linear process takes up for the examination is Hybrid tanks due to its utilization in the field of Pharmaceutical, petro chemical ect., Its non-linearity is because of the cross sectional conduct of the procedure because of the departure of items without wastage is conceivable. The shut circle execution are resolved to get the ideal level control utilizing customary P , PI, PID controllers for different systems like Ziegler Nicholas and Cohen coon technique. The real preferred position of this strategy is straightforwardness. Reproduction results utilizing MATLAB programming to decide the outperformance of controller strategies.

Keywords: Hybrid Tank, Level Control, P, PI and PID controller, Petrochemical Industries, MATLAB software.

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Authors: Gameil S. H. Ali , A. Nithya

Paper Title: Modelling an Adaptive Cluster Head Positioning Based Map Reducing Strategy for Data Transmission in Medical IoT

Internet-of-things (IoT) based health monitoring systems have turned out to be an interesting topic to Abstract: enhance quality of health care services. Moreover, there is no advanced IoT based continuous monitoring of glucose systems in real time and some prevailing techniques have numerous limitations. Here, a continuous and invasive glucose monitoring system for transmitting the condition of individuals simultaneously utilizing IoT is modelled and a general system architectural design for processing back end systems to provide body temperature, real time glucose and contextual data in human readable and graphical forms to the physicians or patients is anticipated. As well, a protocol designs for monitoring the continuous data from IoT devices in order to overcome the short comings of existing methods is provided. The design of an energy efficient routing algorithm is a hot topic in the research of IoT based Data mining. Cluster Heads (CH) form backbone of inter-cluster communication. The selection of reliable and efficient cluster head is another important issue. In most of the clustering process, failure of CH occurs due to energy depletion and if the distance between sink and CH is more, it ultimately leads to failure in transmission. During transmission, nodes may fail that means sudden energy loss or node gets out of coverage. Due to relaying high data traffic, some of nodes quickly exhaust their energy and increase the risk of node failure. As a baseline to node failure, data packet loss also occurs in a CH due to congestion and poor link quality. Hence, one of the most crucial feature in designing a protocol is to minimize energy consumption for betterment of network functioning. Here, a clustering routing protocol based on data mining techniques is applied for sensor nodes in medical field called Adaptive Positioning of Cluster Head based Map reducing (APCH-MR) is proposed. Routing table based code book is generated for privacy concern, in which the process of mapping and reducing the data for dissemination is performed. The simulated outcomes depicts that the total number of packets transmitted in round 500 is 11200, total number of dead nodes during round 500 is 58, and time consumed by nodes at 500 rounds is 0.3751s respectively. The proposed method shows better trade off in contrast to conventional techniques.

Keywords: IoT, sensor data, Adaptive Positioning of Cluster Head based Map reducing protocol, data traffic, energy consumption.

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Authors:	Suleiman Abdulrahman, Mohd Rosli Hainin, Mohd Khairul Idham Mohd Satar, Norhidayah Abd Aliyu Usman.	ul Hassan
Paper Title:	Rutting and Moisture Damage Evaluation of Warm Mix Asphalt Incorporating POFA Modified Bi	tumen

Abstract: The unwanted disposal Palm Oil Fuel Ash (POFA) can be minimised through its application in road construction. Available literatures have shown that POFA improves the performance of hot mix asphalt (HMA), however, its application in warm mix asphalt (WMA) remains unexplored. This study was carried out to investigate the performance of WMA with POFA modified bitumen. In this study, Five percent POFA and 0.75% Evotherm is blended with 60/70 PEN grade bitumen to produce warm POFA modified bitumen (B3). The B3 binder is subjected Fourier Transform Infrared spectroscopy (FTIR), Atomic Force Microscopy (AFM), and Contact angle measurements to understand the effect of this modification at microstructural level. Also, the binder is used in preparing dense graded asphalt concrete (AC14) at 140/130 °C mixing/compaction temperatures rspectively. Mixture performance tests such as Marshall flow and stability, dynamic creep, Asphalt Pavement Analyser (APA), tensile strength ratio, and boiling water tests were used to examine the resistance of B3 binder to rutting and moisture damage. Results from dynamic creep and APA test shows that the WMA mixtures possess 30% improved rutting resistance than the conventional HMA. On the contrary, the WMA sample parade lower resistance to moisture damage by 10% as revealed by the tensile strength ratio test. All the tested samples satisfied the specification limits for AC14 mixture, thus alleviating any concern regarding the moisture damage vulnerability of WMA mixtures.

Keywords: Wet Process, Evotherm, Stripping, Atomic force microscopy, Palm oil fuel ash.

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Authors:Heena Nankani, Shruti Gupta, Shubham Singh, S. S. Subashka RameshPaper Title:Detection Analysis of Various Types of Cancer by Logistic Regression using Machine Learning

Abstract: Cancer is now a day's one of the main diseases which has widely affected among the peoples. A molecular pathologist selects a list of genetic variations of interest that he/she wants to analyze. The molecular pathologist searches for evidence in the medical literature that somehow is relevant to the genetic variations of interest Finally this molecular pathologist spends a huge amount of time detecting the evidence which is related to each of the variations to classify them. The ultimate goal is to replace step 3 by a machine learning model. The molecular pathologist will still have to decide which variations area of interest, and also collect the relevant evidence. In this paper, we apply machine learning methods especially logistic regression (which is more accurate) on the datasets to determine and examine whether there are any signs or possibilities of cancer and if the person is examined as cancerous then the stage of cancer is also determined. Cancer disease is classified into four types named type 1, type 2, type 3 and type 4. Id, Gene, variation, and class are the fields used.

Keywords: Cancer, Gene, variations, class, pathologist, machine learning model.

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- ISABELLE GUYON isabelle@barnhilltechnologies.comJASON WESTON STEPHEN BARNHILL Barnhill Bioinformatics, Savannah, Georgia, USAVLADIMIR VAPNIK vlad@research.att.com AT&T Labs, Red Bank, New Jersey, USA," Gene Selection for Cancer Classification using Support Vector Machines".
- 6. Naresh Khuriwal Nidhi Mishra Department of Computer Engineering Department of Computer Engineering Poornima University Jaipur, India Jaipur, India naresh.khuriwal89@gmail.com, nidhi.mishra@poornima.edu.in,

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Authors: M. Anand, C. Jayakumari

Paper Title:	Automated	Detection	of Macular	Hole in	Optical	Coherence	Tomography	Images	using	Depth-Check
	Algorithm				_					

18.

Abstract: Macular hole is a tear or break in the macula. It is located in the center of the retina and affects central vision of aged people. Optical Coherence Tomography (OCT) enables accurate diagnosis of macular hole. Existing algorithms available to detect cysts and retinal layers, but identifying macular hole in an accurate manner is still a missing entity. Hence we propose an automated system for the accurate macular hole detection. The proposed system

has six stages in process. The first stage starts with preprocessing the OCT image, then detecting Nerve Fiber Layer (NFL). The detected NFL layer is then processed and depth feature is extracted. Then the macular hole is detected in OCT images using our proposed system. The proposed system is evaluated with the healthy macula and macular hole OCT images. The proposed system is also compared with other machine learning algorithms. By experimentation results, the proposed algorithm provides 94% accuracy in finding macular hole.

Keywords: Biomedical Imaging, Depth-Check Algorithm, Macular Hole, Optical Coherence Tomography

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Authors: K. Malathi, R. Kavitha Recognition and Classification of Diabetic Retinopathy utilizing Digital Fundus Image with Hybrid **Paper Title:** Algorithms

Diabetic Retinopathy (Damage in Retina) is the most common threatening diabetic eye disease and cause Abstract: leading vision loss and blindness. A patient with the diabetic disease needs to experience occasional screening of eye. To analysis, ophthalmologists may utilize fundus or retinal pictures of the patient gained from advanced fundus camera. However, if the symptoms are identified earlier and proper treatment is provided through regular screening and monitoring, the blindness or vision loss can be avoided. The present study is intended on developing an automatic system for the analysis of the retinal of fundus images by using image-processing techniques. So as to accelerate the procedure, the discovery of diabetic retinopathy image processing methods is utilized In this proposed study, the performance is evaluated using different segmentation algorithms and classifiers namely fuzzy c-means clustering, naïve Bayesian classifier, support vector machine to detect the diabetic retinopathy. The presentation of the strategy is assessed on the freely accessible retinal databases like DRIVE, STARE. The presentation of the retinal vessels on DRIVE database, sensitivity 100% and specificity 97.5% while for STARE database the sensitivity 99%, specificity 97%. The detection of accuracy can be defined with respect to expert physician hand-drawn and ground truths and the results are comparatively obtained and analyzed.

Keywords: Diabetic Retinopathy, Fundus Image, Classifiers, Fuzzy c means, SVM, Medial Image.

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Authors:	Addepalli VN Krishna, M. Bala Murugan
Paper Title:	A Machine Learning Model for Population Analysis among Different States in India which Influences the
	Socio, Demographic and Economic Needs of Society
Abstract	In this work Data from 2011 census is taken to identify the state which influences more in Population

Abstract: In this work Data from 2011 census is taken to identify the state which influences more in Population census among the different states identified. The data is considered from Madhya Pradesh, followed with Utter Pradesh, then to Bihar, Bengal and Orissa. Similarly other case studies are also done for Southern Indian states and North Eastern States. Genetic algorithm will be tried to find the optimal location for the given study. A fitting function is calculated for the population data of 2011 using Lagrange Interpolation technique. This fitting function is given as input to Genetic algorithm to find the optimal state which have maximum influence in the population growth among different states of India as per the Case studies done.

Keywords:

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Authors:	S. Kangwa, V. Mutambo
Paper Title:	Optimal Extraction Methods Selection for Kakosa South Copper Ore Deposit Applying Modified Technique for Order of Preference by Similarity to Idea Solution Model

Kakosa South copper deposit is located about 450km northwest of Lusaka between Chingola and Abstract: Chililabombwe. A comprehensive study of Kakosa South deposit was carried out. In Kakosa area the footwall aquifer rocks comprising sandstone and conglomerates which are thin and as such are not expected to represent major aquifers. Copper mineralisation is found in the upper quartzite and ore-shale. The inclination of the deposit ranges from 250 up to 350. The hanging wall formations above the upper quartzite are represented by a sequence of dolomite and shale formations. Based on Kakosa geotechnical analysis and rock mass classification, fuzzy TOPSIS approach was employed for the selection of optimal extraction techniques. FTOPSIS approach has precise and specific quantities which are used in order to establish criteria and option weights. Triangular fuzzy numbers were determined to represent semantic variables. The fuzzy numbers for Kakosa South parameters were used as input data in the decision making model and matched against the criteria required for the mining method. Applying FDM model, 127-132 extraction techniques were ranked. The results indicated that open pit extraction technique was ranked first with 78.90 scores followed by sublevel stoping with 66.88 scores. It is concluded that the Kakosa South copper ore deposit can optimally be extracted by open pit mining up to transition depth and transit from open pit mining to underground mining employing sublevel stoping.

Keywords: Extraction technique, Kakosa, TOPSIS.

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Authors:Rajdeep Choudhury, Sudipta Hazarika, Utpal SarmaPaper Title:Detection of Water Stress in Khasi Mandarin Orange Plants from Volatile Organic Compound Emission
Profile Implementing Electronic Nose

Abstract: Plants in the absence of an innate immune system like animals and being immobile are regularly exposed to a host of stresses, ranging from biotic to abiotic stresses. In response to these, plants have developed a complicated response system like reprogramming gene expressions and emission of secondary metabolites as volatile organic compounds (VOCs) by its various tissues like roots, stems, leaves etc. These VOCs can be used as biomarkers for inspecting plants' in situ health status. This paper address the usefulness of electronic nose (e-nose) system to sense the VOCs emitted by plants' leaves to detect the stresses in it. Standard commercial electronic nose (e-nose) system Alfa Mos Fox 3000 has been used here to identify the stressed and non-stressed plants. Fifteen Mandarin orange plants were considered for the study and were subdivided into three categories. Each one was subjected to a different level of water stress. Leaf samples were collected for e-nose analyses from each plant of all three categories on the 15th day and 30th day of induction of water stresses. Dimensionality reduction techniques like kernel Principal Component Analysis (kPCA), Linear Discriminant Analysis (LDA) and classification algorithms like Support Vector Machines (SVC) and Multi-Layer Perceptron Classifier (MLPC) have been used to classify the three categories of plants. The scores obtained from these analyses reveals the feasibility of using an e nose system in discriminating plants based on the status of water stress in them. This paper analyses the applicability of e nose system in stress diagnosis of agricultural and horticultural crops, which would significantly help in controlling the irrigation regime.

Keywords: About four key words or phrases in alphabetical order, separated by commas.

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Authors:Oleksiy Korepanov, Yanislava Goncharenko, Sergey Mekhovich, Oksana Dyshkantiuk, Svitlana Salamatina,
Valentyna RusavskaPaper Title:Economic-Mathematical Modelling of the Distribution of Investments in the Tourism and Hospitality

Abstract: Among the world's leading concepts for the development of the tourism industry, a special place is occupied by the distribution of investments in tourism and hospitality. The theoretical aspects of the distribution of investments are analyzed in sufficient detail in scientific works, but there is a clear deficit of serious research on the mathematical modelling of the distribution of investments in the field of tourism and hospitality. The article presents the economic-mathematical model of the distribution of investments in tourism and hospitality. In this work, the investment strategy of activity of the travel agent is developed, depending on the received plan of realization of the developed tours.

Keywords: Economic-Mathematical Modelling, Investments, Hospitality, Tourism.

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Authors: R. Kunjana Rahardi, Yuliana Setyaningsih

Paper Title:Contextualizing Local Values of Children's Games in the Perspective of Ecopragmatics to Enhance Culture-
Specific Based Communication

Abstract: This research focuses on the contextualization and preservation of the diminishing local values which are slowly abandoned by the young generation. The data consists of texts containing local values or presumed to contain values collected by the researchers. The data was gathered by observing the texts describing traditional children's games during the timeline of research. The technique to implement the observation method was recording and note-taking. Besides, interview or speaking method was employed to gather the data. Interview was conducted to experts who understood the values of local wisdom contained in the traditional children's games. The data analysis was done using the distributional and content analysis methods. The result of the analysis shows that the values of local wisdom contained in the tradition; (2) Agility and Fighting Spirit; (3) Creativity and Adaptability; (4) Creative Imagination; (5) Acceptance of the Facts of Life; (6) Fulfilling the Destiny; (7) Obedience and Discipline; (8) Intelligence Test; (9) Synergy and Collaboration. These values and wisdoms were found in the following games: (a) Dedek-Dedekan, (b) Rerodaan, (c) Bentik, (d) Topeng-Topengan, (e) Boneka Kodokan, (f) Kitiran Umbul, (g) Masak-Masakan, (h) Polisi-Polisian, (i) Mekrok, (j) Dingklik Oglak-Aglik. **Keywords:** contextualization, local wisdom, traditional children's games, ecopragmatics

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Authors: **Omprakash S S, Naveen Kumar S K**

Paper Title: Fabrication of Custom-Designed and Cost-Effective Spin-Spray Pyrolysis Unit

Abstract: In this paper, an efficient, spin-spray pyrolysis unit is designed and constructed for the deposition of oxide thin films. The system is an effective combination of two independent techniques such as spin and spray methods. The rotation of the substrate by keeping the spray nozzle stationary makes the system unique. The system allows the decomposition of the solution before reaching the substrate. Spin-spray pyrolysis unit is capable of coating thin films on different substrates like float glass, FTO coated glass, and Aluminum coated glass, Teflon, and kepton, of dimensions up to 4-inch diameter, any contour and scalable to industrial applications. Metal oxides like Al2O3, GZO, ZnO etc., can be coated for many applications such as solar cells, thin-film transistors, sensors, etc. The elements required for construction of spray pyrolysis units are a heater, spray nozzle, thermocouple, solution feeding unit, airflow assembly, substrate rotator, and exhaust assembly. The elements of the system are discussed in accordance with the cost estimation. The working principle of each element of the system is explained in a separate block diagram. The system is optimized for deposition of ZnO thin films on a glass substrate and is characterized. The thin-films can be used for development of TFT's, heaters, thermistors, piezo-electronics devices, sensors, antireflection coatings and solar cell.

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Keywords: Spray pyrolysis unit; thin films; instrumentation;

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Contextualizing Local Values of Children's Games in the Perspective of Ecopragmatics to Enhance Culture-Specific Based Communication

R. Kunjana Rahardi, Yuliana Setyaningsih

Abstract: This research focuses on the contextualization and preservation of the diminishing local values which are slowly abandoned by the young generation. The data consists of texts containing local values or presumed to contain values collected by the researchers. The data was gathered by observing the texts describing traditional children's games during the timeline of research. The technique to implement the observation method was recording and note-taking. Besides, interview or speaking method was employed to gather the data. Interview was conducted to experts who understood the values of local wisdom contained in the traditional children's games. The data analysis was done using the distributional and content analysis methods. The result of the analysis shows that the values of local wisdom contained in the traditional children's games are values of: (1) Affection; (2) Agility and Fighting Spirit; (3) Creativity and Adaptability; (4) Creative Imagination; (5) Acceptance of the Facts of Life; (6) Fulfilling the Destiny; (7) Obedience and Discipline; (8) Intelligence Test; (9) Synergy and Collaboration. These values and wisdoms were found in the following games: (a) Dedek-Dedekan, (b) Rerodaan, (c) Bentik, (d) Topeng-Topengan, (e) Boneka Kodokan, (f) Kitiran Umbul, (g) Masak-Masakan, (h) Polisi-Polisian, (i) Mekrok, (j) Dingklik Oglak-Aglik.

.Keywords: contextualization, local wisdom, traditional children's games, ecopragmatics

I. INTRODUCTION

The discussion of local wisdom gained momentum not only because of the industrial revolution 4.0 that is happening right now [1], but it was also discussed fervently when the world was slowly entering the globalization era in the recent past [2]. In that time, the buzz word related to local wisdom was glocalization. It means that it is more important and urgent to embed local wisdom values in the society to prevent the negative impacts of globalization from taking place (Ritzer, 2003; Roudometof, 2016). As computer-based technology and other digital technology develops according to the demands of time, it does not mean that local wisdom should be abandoned and allowed to diminish [4]. Contextualization of the local wisdom values is urgent to be implemented because of the diminishing trend of the values. Today's young

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Yuliana Setyaningsih, Master Program of Language and Literature Education, Faculty of Teachers' Training and Education, Sanata Dharma University Sanata Dharma University, Yogyakarta, Indonesia. Email: vulia@usd.ac.id people and teenagers are no longer familiar with the values of local wisdom. To make matters worse, even well-established adults may not always understand and be aware of local wisdom values [5]. This research aims to preserve local wisdom values which are diminishing and being slowly from generation to generation, especially the values contained in the traditional children's games [6]. The main purpose is to preserve and cultivate the traditional children's games containing local wisdom values. In addition to describing the manifestation of the local wisdom, this research aims to reveal the values of life contained in each of the traditional children's games (Wibowo et al., 2012). Education in all levels may take the benefit from this research, especially the educational institutions strongly concerned with the local wisdom values and character education.

II. LITERATURE REVIEW

The major theory underlying the research is the theory of ecology and linguistics. Linguistics cannot stand on its own or flourish without synergizing with other disciplines in inter-disciplinary, multidisciplinary, and trans-disciplinary research [8]. Ecolinguistics is included as interdisciplinary, by combining linguistics and ecology (Rahardi, et al., 2016). Linguistics and ecology emphasize on the dimensions of ecology [10]. Thus, the linguistic dimensions are not the only one being highlighted in the ecolinguistic study [11]. In its further development, ecological linguistics shifted its focus on the linguistic domain. Therefore, the ecological dimension no longer becomes the main focal point of the discussion, hence the term ecolinguistics is coined (Do Couto, 2014; Chen, 2016).

Ecolinguistics is divided into two: first, ecolinguistics concerning the nature or physical environment; and second, ecolinguistics concerning the society or humanities. Ecolinguistics concerning the nature is called physical ecolinguistics, while ecolinguistics concerning society is called metaphorical ecolinguistics (Gerbig, 2003; Kravchenko, 2016). Both physical ecolinguistics and metaphorical /societal ecolinguistics interact with pragmatics as the newest branch of linguistics. When Ecolinguistics, which is interdisciplinary in nature, is combined with pragmatics, they will be coined into a new term 'ecopragmatics' (Wimberley, 2017; Stibbe, 2010).

That being said, ecopragmatics is an interdisciplinary field because it covers three disciplines altogether, namely

ecology, linguistics, and pragmatics (Rahardi, et al., 2016; Do Couto, 2014). The



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perspective used in this research is ecopragmatics as mentioned earlier in this article. The existence of context in ecopragmatics is absolute as a consequence of the choice of perspective. Contexts are classified into two major groups, namely internal context or commonly known as intralinguistic contexts or co-text, and external contexts, known as extralinguistic context or just context [17].

Internal contexts are dyadic. Dyadic contexts refer to the linguistic meaning which is semantically unrelated with the external contexts, or commonly known as semantic meaning (Rahardi, 2018; Ray, 2004). Certain experts call it linguistic meaning, instead of semantic meaning or dyadic meaning. Understanding meaning internally is relatively easy, because essentially each linguistic entity has meanings and each meaning is different from the other. Even though the meanings look the same, actually they are different because no word has the same absolute meaning [20].

Consequently, the study of synonyms was already carried out and spread widely to the general public. For this reason, there should be an in-depth study or review to generate new understanding of research to revise the old widespread misconception of the semantic meaning. Furthermore, the external contexts are extralinguistic in nature. External contexts determine the pragmatic meaning or intention, in spite of its correlation with both physical and metaphorical ecolinguistics [21]. External contexts are classified into at least three areas, namely social and societal, cultural, and situational contexts [22]. Social contexts are not the same as the societal contexts in terms of types of communal relations. Social context is horizontal, while societal context is vertical [23]. The characteristics of horizontal relationship can be seen in the relationship among students, the sellers, farmers, fishermen, etc. The relationship they establish does not involve social status, rank, level, and class because it is horizontal. The characteristics of a vertical relationship can be seen in the relations between a student and a lecturer, an employee and an employer, a subordinate and a superordinate, a labor and a master, a servant and a royal patron, etc. It should be affirmed, therefore, that the discussion of local wisdom cannot be separated from the culture and society where the values are embedded (Senanayake, 2016; Teasdale & Ma Rhea, 2000). Local wisdom is commonly understood as the values of life shared in the community, passed on, and preserved from generation to generation. The values of local wisdom are long-lasting because the values are extracted from the real-life customs of the community. The society who has heterogeneous and numerous values of local wisdom is categorized as a cultivated culture. In contrast, a society without established cultural construction and uncultivated and uncared for culture may not inherit significant local wisdom. As a part of cultural activities of the community, traditional children's games contain local wisdom values. Local wisdom found in the traditional children's games must be preserved and cultivated properly. Local wisdom is a growing potential asset nowadays because of the influence of the development of science and technology, both in the context of the globalization and in the framework of the industrial revolution 4.0.

III. METHODOLOGY

The ecopragmatic research dealing with local wisdom values contained in the traditional children's games is of a

descriptive qualitative type [25]. The research data source was divided into two, namely locational and substantive data sources. The locational data source of this research was the children in the Javanese culture and community, especially those living in Yogyakarta. The substantive data source was the local wisdom values contained in the traditional children's games deeply rooted in the society [27].

Interviews were conducted to several figures who understood local wisdom values in the Javanese culture and society, particularly in Yogyakarta. Researchers generated substantive data source intuitively in the research considering the fact that the researchers have a close linguistic and cultural distance with the object of the research. All the texts presented in this research contain local wisdom values or presumed to contain values of local wisdom. The object of the research was the local wisdom values contained in the traditional children's games [28]. The research data was gathered using the observation method by observing the texts describing the traditional children's games obtainable during the timeline of the research. The techniques employed in the observation method were recording and note-taking [29]. The transcription and transliteration process was carried out accurately in the research implementation. In addition to the observation method, a speaking or interview technique was also employed to gather ecolinguistic research data related to local wisdom values. Interviews were conducted to the figures who understood the local wisdom values in the Javanese community and culture, particularly in Yogyakarta and its vicinity. Additionally, interviews were conducted to the children who demonstrated and acted out the traditional children's games. The gathered data were then classified and typified to see their categories and types. The next step involved analysis and interpretation of the classified and typified data. The analysis was conducted using distributional and content analysis methods [30]. The result of data analysis was then triangulated to the experts of local wisdom values or some competent cultural experts to ensure that the analysis and interpretation conducted by the researchers were appropriate, correct, and had fulfilled the validity measures.

IV. RESULT AND DISCUSSION

In this section, each type of traditional children's games in the Javanese community and culture, particularly in Yogyakarta, will be described. Illustrations was provided to clarify the description of the traditional children's games. The researchers also contextualized the values found in the traditional children's games in today's contexts to see the extent to which the local wisdom values are preserved in the widespread popular culture nowadays. In the next section, the traditional children's games which preserve the local wisdom values will be described one by one.

1. The Local Wisdom Value of Affection

The essence of life is affection. People care about fellow human beings because they have a sense of affection. People are willing to collaborate with others because the local wisdom value of affection resides in each of the people. Affection is a very important element in the individual life of the people as community members.



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Dedek-dedekan Traditional Game

This game is commonly played by several girls in a rural area. Each of the players carry a doll as a baby she cares for. They play mothers or sisters of the baby by imitating the gestures of loving mothers and sisters such as patting, rocking, caressing, baby-talking, buying things, kissing, serenading, baby-feeding, putting them to sleep, etc. The role play is done to exercise their skills so they could give the same affection to their own children or siblings that God bestows on them.



Figure 1. Children are playing dedek-dedekan in the garden

The character of affection is the significant characteristic of humanity. People having great affection has a high value of humanity. The value must be fostered since early childhood. In rural areas, especially villages, the 'dedekan' game is played in the wide open front yard of a house or in the spacious garden serving as children's playground. The word 'dedek-dedekan' is an iconic term derived from the diminutive vocative address 'dik' or its variant 'dek'.' It comes from the word 'adik' which means 'little brother or little sister. Through the instilment and development of children's character of affection through traditional children's game 'dedekan', there were no cases of babies being abandoned, killed, neglected, sold, and abused [31]. Thus, it can be confirmed again that the game 'dedek-dedekan' trains children to respect life [32].

2. The Local Wisdom Value of Agility and Fighting Spirit

Professional success is determined by how far someone has a fighting spirit. Weak fighting spirit causes someone to complain easily, to dodge problems, and finally to fail to participate in the community life. The importance of the local wisdom value of fighting spirit is shown in the traditional children's game since the ancient times.

Rerodaan Traditional Game

The 'rerodaan' game is played by both boys and girls. The instrument to play the game is used car tires, bicycle wheel rim, or motorbike wheel rim. The tire or the rim is rolled around in a specific speed using a twig or a wooden stick to direct, adjust the speed, and to maintain balance. The player's fighting spirit and agility is tested as to how far each player can maintain balance and adjust direction and speed of the tire or rim precisely.



Figure 2. Children are playing rerodaan in the village street

The value of fighting spirit and agility is an important character to be instilled and developed in the minds of the children since early age. The success of the value implant can greatly impact on the children's success in their adult life. The game 'rerodaan' is played by village children because the game is cheap and the material is available anywhere. In addition, there are still vacant lots where children can play the game freely without having to endanger themselves and other people. It is revealed that some people who are successful today used to play the traditional game 'rerodaan' when they were children because this game taught them to have relentless fighting spirit and agility which have shaped their character to be resilient [33].

Benthik Traditional Game

The traditional children's game 'benthik' trains children's fighting spirit. The game 'bentik' is played using two sticks of a certain branch of a tree. The first stick is long and used as a lever; while the other one is a shorter stick to be hurled. The success of the game is determined by the distance the short ejected stick lands on the ground and by the failure of the opposing team to catch the stick.



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Figure 3. Children are trying to lever the stick in the bentik game

The value of local wisdom contained in the 'bentik' game is fighting spirit and agility. The fighting spirit is trained by accustoming children to levering the stick as hard as he could to reach the distance as far as possible. The value of agility is trained by their ability to catch the ejected stick dexterously. The local values were intended by our ancestors to get children used to work hard instead of complaining, focusing on difficulties, and feeling helpless when they grow up [34]. Moreover, the exercise on agility during childhood will make them agile, smart, dexterous, and quick-witted adults.

2. The Local Wisdom Value of Creativity and Adaptability

Being able to adapt in the community life is very crucial. Someone who cannot adapt to the environment may face many challenges in life with other people. They may face confrontation with other people. The value of creativity is very important to instill and development.

Topeng-topengan Traditional Game

Playing masks is actually not a typical cultural art form from Yogyakarta and Central Java. It is a typical Sundanese art. One of the areas in West Java which has a strong cultural influence on the Javanese culture is Cirebon. Cirebon is well-known for the traditional mask arts. Therefore, the children in Central Java and Yogyakarta imitate this traditional art by making paper masks. Masks made of wide leaves are tied with rubbers and worn to cover children's faces by attaching the rubber bands around the ears. The cultural values of the masks game is a role play of certain characters. A child may wear a giant face to portray a hard, fierce, greedy, rude character. On the contrary, a child may wear the mask of Arjuna, a polite, soft-hearted, graceful knight in the shadow puppet show or wayang. The mask game can be used to portray any characters, both good and evil characters as a role play exercise.



Figure 4. Children are playing topeng-topengan in the garden

Someone who can juggle several roles, characters, and figures is said as someone who can "ajur-ajer" in the Javanese culture. Being 'ajur-ajer' means that the person is multitalented, adaptable, and versatile because he/she can do any tasks assigned to him/her. Such person tends to thrive successfully because he/she is adaptable and malleable to adapt to any environments and any type of tasks. In contrast, people who are picky in doing tasks are usually less flexible in living in the communal life [35].

3. The Local Wisdom Value of Creative Imagination

The development of creative imagination is very crucial to develop a nation. The community members who have creative imagination will be able to develop the nation where he lives and seeks livelihood. The local wisdom value of creative imagination must be developed so that the community may thrive and succeed in welcoming the challenge of the times.

Boneka Kodokan Traditional Game

Boneka Kodokan or a frog doll is usually made by boys by folding used papers according to a frog-shaped model. Then, the frogs are played to portray specific imaginary characters. Children narrate the story of the frog dolls to form the whole story. Through the game, children train themselves to be leaders. They use their imagination to portray a character and then narrate the attitude, behavior, and the trait of the character.



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Figure 5. Children are playing boneka kodok

Essentially, human beings as homo ludens (or players) [36] who could play several roles in the community start to emerge since childhood when they play drama. In playing the frog doll, a character is narrated and portrayed according to one's imagination. It indicates that the ability to manage, organize, and portray characters has been trained since early age. It is expected that children are smart in playing the different types of roles so that they are good at organizing people and events when they are adults.

4. The Local Wisdom Value of Acceptance of the Facts of Life

Awareness of life, both the natural and social life, is very basic in the development of an individual, a community, and a nation. Living in peace will happen to the people who realize the importance of life. The local wisdom value must be developed so that it will not be eroded by time.

Kitiran Umbul Traditional Game

The 'kitiran umbul' game is played using hard leaves of a certain tree so that when it is tossed up, the leaves can reach a certain height and land in a zigzag movement like a windmill. When the dry leaf touches the ground, the players approach to see whether it lands upward or facedown to determine the winners and the losers. Some winners get another chance to fly up their leaves to determine a single winner. The cultural note contained in the game is the value of reality. From early age, children are faced with the reality of life. Life may bring luck or misfortune. However, joy and togetherness must be maintained in any situations.



Figure 6. Children are playing kitiran umbul in the garden

Luck and misfortune in life are inevitable facts of life. A person's readiness to face the inevitable is the value that parents want to teach their children through the game 'kitiran umbul'. Life is like a spinning wheel. Sometimes you are on top of the wheel, sometimes you are at the bottom. You win some, you lose some. Any hardship and obstacles in life must be faced with happiness, enthusiasm, joy, and togetherness [37].

5. The Local Wisdom Value of Fulfilling the Destiny God creates human beings according to their own destiny, which cannot be manipulated. Social welfare will be realized when each member of the community realizes their own destiny. Female destiny is different from the male destiny, which must be accepted without arguments.

Masak-masakan Traditional Game

The traditional children's game 'masak-masakan' or cooking game is played mostly by girls. However, boys can also play their part in the game. Some children may synergize to play the roles of a father and a mother in the game to prepare meals for the family. Using simple cooking utensils and rudimentary ingredients such as leaves and twigs from the surrounding garden, children can act out the role play as a father and a mother in a household. Culturally, preparing meals for the family is usually done by the females. The role of seeking food and firewood becomes male responsibility. This confirms that in the game 'masak-masakan', boys and girls learn about their gender roles to fulfill their destiny.



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Figure 7. Children are playing a role as cooking housewives

The woman's gender role as housewives is to prepare meals for the family and the male gender role is to look for food and all other ingredients. This destiny is implanted among children since early age. Some families still maintain the roles. However, some families cannot maintain the gender-based labor division due to several conditions and reasons. Even though the development of times allows the destiny-based gender roles to be modified, in reality some gender roles are very essential and irreplaceable (Lieberman, 2009).

6. The Local Wisdom Value of Obedience and Discipline

Obedience and discipline are requirements to create harmony in life. Harmonious life will happen when each of the community members does not violate regulations. To respect laws and order, one must always strive to obey and uphold the law. Only through obedience to laws, harmonious community will be materialized.

Polisi-polisian Traditional Game

Playing roles in the traditional game '*polisi-polisian*' must involve several boys and girls. The game starts by determining the role of policemen / policewomen and the role of 'thieves'. The decision is made by counting and singing '*ling ling maling dan si si si polisi*'. Then, they divide themselves into a 'policemen' group and a 'thieves' group. The policemen group discuss a strategy to catch the thieves, while the group of thieves finds the way to avoid being caught by the policemen. However, when the policemen could catch the thieves, discipline and obedience must be maintained.



Figure 8. Children are playing a role as 'policemen' and 'thieves'

The local wisdom value of the '*polisi-polisian*' game deals with discipline and obedience in life. In the society, social harmony can be maintained when everyone realizes the essence of discipline and obedience to norms. Criminal cases occur because community members disobey norms [39]. Television reports widespread violation of discipline and obedience to the law and this indicates that the values of discipline and obedience are not deeply-ingrained in the minds of the people since they were young. Nowadays, it is rare to see children playing roles, such as in the '*polisi-polisian*' game, which in turn can aggravate the future children's sense of discipline and obedience.

7. The Local Wisdom Value of Intelligence Test

Living in the modern era like today, people must be free from ignorance and stupidity. Each person must strive for intellectual endeavors both for oneself and for others in order to develop the community. The value of intelligent test is the basic requirement because it frees human beings from their misery.

Mekrok Traditional Game

The traditional children's game '*mekrok*' uses the papers drawn with pictures of mathematical figures, fruits, and certain questions. The papers are folded in a certain pattern to form a blooming flower or in the Javanese language '*mekrok*.' Using a specific song created by the players, one of the children chooses the paper by calling out a specific mathematical figure or specific name of fruits. The number of fruit being called out is related to the questions written inside the folded papers. The questions deal with random stuff and must be answered correctly. Therefore, the trivia quiz game can be used to train children to think and figure something out.

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Figure 9. Children are playing mekrok using papers

Training children's intelligence is not merely done through formal learning at school, but it can also be done through playing with peers outside of classroom. By testing their intelligence using a trivia quiz game, the children are trained to be smart, capable, resilient, and knowledgeable individuals when they grow up [40]; [41]. In the traditional children's game 'mekrok', the intelligence test is done through a fun and exciting trivia quiz game.

8. The Local Wisdom Value of Synergy and Collaboration

Without synergy and collaboration, no human beings can succeed in the highly competitive era like today. Great and outstanding achievement will only be reached when synergy and collaboration are deeply ingrained. Since childhood, children are trained to live collaboratively through children's games they play.

Dingkil Oglak-aglik Traditional Game

The cultural value of the traditional children's game 'dingklik oglak-aglik' is synergy and collaboration. These two values are realized in the process of synergizing the players' feet which are locked behind their bodies. The game is played by four people at the most. Thus, there are four legs being bent backwards and locked with each other's legs. The resilience to synergize and collaborate with each other is tested and trained by way of circling and tiptoeing. When the synergy and collaboration are not strong, the players will collapse on the ground shortly after they stand.



Figure 10. Children are playing dingklik oglak aglik in the garden

The values of synergy and collaboration are not new concepts in the Indonesian life, especially the Javanese communal life. In Java, the values of synergy and collaboration are manifested in the practice of 'gotong royong' or mutual cooperation. As a typical value, the predecessors train their young in the traditional game called 'dingklik oglak-aglik' or 'totter-teeter stool'. As we can see, it is easy to mobilize Indonesian people to collaborate and cooperate for the common goal. This value or spirit has been deeply ingrained by our ancestors who trained the young generation to synergize and collaborate through traditional children's games [37].

V. CONCLUSIONS

The research found at least 9 manifestations of local wisdom in the Javanese cultural traditional children's games, particularly found in the area of Yogyakarta. The local values are urgent and important to be re-actualized and utilized to develop the Indonesian children's characters through education. The values are described as follows: (1) The Local Wisdom Value of Affection; (2) The Local Wisdom Value of Agility and Fighting Spirit; (3) The Local Wisdom Value of Creativity and Adaptability; (4) The Local Wisdom Value of Creative Imagination; (5) The Local Wisdom Value of Acceptance of the Facts of Life; (6) The Local Wisdom Value of Fulfilling the Destiny; (7) The Local Wisdom Value of Obedience and Discipline; (8) The Local Wisdom Value of Intelligence Test; (9) The Local Wisdom Value of Synergy and Collaboration. The local wisdom values can be found in the names of the following traditional children's games: (a) Dedek-Dedekan, (b) Rerodaan, (c) Bentik, (d) Topeng-Topengan, (e) Boneka Kodokan, (f) Kitiran Umbul, (g) Masak-Masakan, (h) Polisi-Polisian, (i) Mekrok, (j) Dingklik Oglak-Aglik.



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The benefits of the research on local wisdom values in the ecopragmatic perspective are integral in the educational endeavor to rehabilitate, assist, and educate children who are highly exposed to the digital game materials which are not based on local culture by embedding the values of relevant good characters contained in the traditional children's games.

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