

**International Conference on
Society of Business, Economics,
Social Science & Humanities**

BESSH-2016



**May 28-29, 2016
Osaka, Japan**



CONFERENCE PROCEEDINGS

BOOK OF ABSTRACT BESSH-2016

**International Conference on
“Business Economic, Social Science & Humanities”
(BESSH-2016), Osaka, Japan**

Book of Abstracts Proceedings

**International Conference on
“BUSINESS ECONOMIC, SOCIAL SCIENCE &
HUMANITIES”
(BESSH-2016)
Osaka, Japan**

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(BESSH-2016)”

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**International Conference on
“Business Economics, Social Science & Humanities
Osaka, Japan”**

Venue: Rihga Royal Hotel Osaka

ORGANIZING COMMITTEE

1. Ms. Ani Wahyu

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Conference coordinator

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PROGRAM COORDINATOR MESSAGE

Ms. Ani Wahyu

International Conference on Business Economic, Social Science & Humanities” serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the challenges faced by our societies globally. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences.

I am really thankful to our honorable scientific and review committee for spending much of their time in reviewing the papers for this event. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let’s break all the discriminating barriers and get free from all minor affiliations. Let’s contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you.

Ms. Ani Wahyu

Program Coordinator

Email: aniwahyu@academicfora.com

BESSH-2016

CONFERENCE PROGRAM

DAY 01 Saturday (May 28, 2016)

Welcome Reception & Registration

8:00– 8:30 am

Opening Ceremony (8:30 – 09:00 am)

Venue: Room 1

| | |
|-----------------|---|
| 08:30 – 8:40 am | Introduction of Participants |
| 08:40 – 8:50 am | Welcome remarks- Ms Petrel Qiu - Conference Coordinator Academic Fora |
| 08:50 – 9:00 am | Group Photo Session |

Grand Networking Session and Tea Break (9:00- 9:15am)

DAY 01 Saturday (May 28, 2016)

Session 1 (9:15 am – 12:00 pm)

Venue: Room 1

Session Chair: Dr. Atchareeya Saknarong

Track A: Business, Economics Social Sciences & Humanities

| | | |
|-------------------|---|-------------------------------|
| OKS-556-111 | The Use of Graphic Design Elements for Halal Products Packaging | Pibool Waijittragum |
| OKS-556-115 | Economic and Environmental Effects of A Cut of Carbon Emissions in Thailand | Anan Wattanakuljarus |
| OKS-556-116 | Instructional Package for Learning Disabilities Students in Learning Multiplication | Mohini Mohamed |
| OKS-556-121 | An Investigation on the Bundles from Traditional Turkish Clothing Culture | Miyase Cagdas |
| OKS-556-122 | A Study Into the Features of Handmade Dolls From Argithani Town in Konya Province | Aysel Cagdas |
| OKS-556-123 | A Study Into the Clothing Features of Folkloric Trinket Dolls Characterizing Turkish Culture | Fatma Ulku Yildiz |
| OKS-556-124 | Content Analysis of Art and Cultural Open Data on Taiwanese Governmental Websites | Mei-Hsueh Yang |
| OKS-556-136 | Effective cross-cultural interactions: the role of communicative styles and flexibility of the frame of reference | Elena Lvina, |
| OKS-556-128, 128A | Association Rule Discovery from Manufacturing Time-series Sensor Data | Jae-Yoon Jung, Hoonseok Park, |

Lunch Break: (12:00-01:00pm)

DAY 01 Saturday (May 28, 2016)

Session 2 (01:00 am – 3:15 pm)

Venue: Room 1

Session Chair: Sanggil Kang

Track A: Business, Economics Social Sciences & Humanities

| | | |
|-------------|--|-------------------|
| OKS-556-129 | Spatial Movement Pattern Analysis in Public Transportation Networks Using Dynamic Programming | Kyuhyup Oh |
| OKS-556-130 | Comparison of Regression Algorithms for Quality Prediction in Manufacturing Process | Aekyung Kim |
| OKS-556-132 | Practicing Multiplication through Digital and Desktop Card Games | Shih Ying Han |
| OKS-556-133 | Applying online material to help the elders of remote area to learn computer | Ju Yin Huang |
| OKS-556-134 | Paper Title The more, the Better? -An analysis of E-portfolio System Used in University | Yu Rou Lin |
| OKS-556-139 | Exploring Students' Perception of Organ Donation and Willingness as Potential Organ Donor in the UK | Rudi Gunawan |
| OKS-556-126 | Whose Trades Move Stock Prices? Evidence from the Taiwan Stock Exchange | Zong Wei Lin |
| OKS-556-127 | Brand Visibility, Cash Flow Stability and Firm Value | Ching Yang Chen |
| OKS-556-143 | A Political Ecology of Hua Na Dam Hydropower Development Project: Case Study from Social Movement and Local Livelihoods of Villagers in Baan Nong Ong Village, Sisaket, Thailand | Thitarat Panchana |

Tea Break (03:15- 03:30 am)

DAY 01 Saturday (May 28, 2016)

Session 3 (03:30 am – 5:30 pm)

Venue: Room 1

Session Chair: Jae-Yoon Jung

Track B: Engineering and Technology study

| | | |
|-------------|---|----------------|
| OKE-556-101 | On (Strong) Rainbow Connection Number of Graphs | Yung Ling Lai |
| OKE-556-103 | Speech Intelligibility Enhancement Based on Room Equalization in Indoor Noise Environments | Taeuk Kim |
| OKE-556-104 | Efficiency of Arithmetic Representation for Intelligent Controllers Implemented on FPGA | Kuan Yi Lin |
| OKE-556-106 | Prediction of Structural Response due to Earthquake Load using Artificial Neural Networks | Reni Suryanita |
| OKE-556-107 | Estimation of Pile Bearing Capacity of Single Driven Pile in Sandy Soil using Finite Element and Artificial Neural Network Methods. | Harnedi Maizir |

Track: C Medical Medicine and Health study

| | | |
|-------------------------|---|--|
| OKM-556-101 | Formulation and Development of Dutasteride/Tamsulosin Pellets Dosage Form for Benign Prostatic Hyperplasia | HongLiang Lin |
| OKM-556-102, 102A, 102B | The Empowerment of People Affected by Leprosy through Making Biogas to Increase Productivity and Eliminate the Discrimination of People Affected by Leprosy in Sumber Glagah Village, Indonesia | Sarah Christiawan, Salihati Hanifa, Widya Regsha |
| OKM-556-107 | More Stem Cells Can Be Harvested: An Automated Ex-Utero Cord Blood Collection Device with Clinical Significance | Tang, Kok-Zuea |

Closing Ceremony

LIST OF CONFERENCE ATTENDEES

The following Scholars/ practitioners/educationist who don't have any paper presentation, however they will attending the conference as delegates & observers.

| Sr.no | Official ID | Name | Affiliation Details |
|--------------|--------------------|--------------------------|--|
| 1 | OKE-556-109A | Sanggil Kang | Inha University, Korea |
| 2 | OKS-556-107A | Dr. Atchareeya Saknarong | Business Administration Department, Faculty of Social Sciences Srinakharinwirot University Bangkok, Thailand" |
| 3 | OKS-556-124A | I-Ning Chao, | Department of Graphic Arts and Communications, National Taiwan Normal University |
| 4 | OKS-556-124B | Chia-Yu Chen | Department of Graphic Arts and Communications, National Taiwan Normal University |

DAY 02 Sunday (May 29, 2016)

City Tour and Shopping Day

All respective guests are free to conduct their own sightseeing and tour. The second day of the event is reserved for this memorable purpose



**TRACK A: BUSINESS, ECONOMICS, SOCIAL
SCIENCES & HUMANITIES**

The Use of Graphic Design Elements for Halal Products Packaging

Pibool Waijitragum*

Suan Sunandha Rajabhat University, Thailand

Abstract

Southeast Asia consists of 10 countries. Three of them are Muslim country and one of them is the largest Muslim country in the world, with the comprising approximately Muslim populations around 230 million. In 2012, Food product ingredients from Thailand have been imported to Indonesia and Malaysia for 1,000 million US dollars and then produced to Halal products. In the event of pushing Thailand to be the center of Halal products, the turning point should has been considered are: reforming the reliability, identity and national cooperation. The only one advantage of Thailand is the preparedness of food manufacturer system., Attitudes, Purchase reasons and Incentive to Purchase. In addition, the Graphic styles which Muslim consumers have been selected were studies. The fundamental of graphic style consists of 1) Picture 2) Typographic 3) Color 4) Motif and graphic form. The research result will be using for setting a design brief of Thai Halal packaging. The expected benefit is Thai Halal products that related to the way of life for Indonesian consumers and also have been the marketing strategy for building a brand of Thai exported Halal products to Muslim countries. The research methodology was applied using qualitative and quantitative. Data analysis will be according to 3 categories of Indonesian and Malaysian food products; 1) Instant food 2) Beverage and Snack 3) Seasoning ingredient. The results will be explaining the utility of Graphic Design elements and will be applies to the packaging of Halal products. Overall results, as following 1) Package design with the concept of Universal style; modern style of image, typeface, color and motif 2) Package design with the concept of Thai style; Thai local style of humor image, dazzling typeface, vivid color and embellish motif 3) Package design with the concept of Islamic style; Islamic and Arabian style of traditional image, handwriting typeface, earth tone color and Islamic embellish motif.

Keywords: Thai Halal Products, Packaging Design, Indonesian Food Products, Malaysian Food Products, Graphic Design Elements

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Instructional Package for Learning Disabilities Students in Learning Multiplication

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Universiti Teknologi Malaysia, Malaysia

Abstract

This is a report about a study in designing and developing an assistive mathematical teaching aid and investigating the effectiveness of four instructional methods which are multimedia interactive tool, direct instructional flashcards, manipulative instructions by using concrete objects and mnemonics as a package in helping learning disabilities students in learning multiplication. Another aspects were studied are learning styles, students' confidence level and self-esteem. A purposive sample consisting of 6 students were selected from Special Classes at a certain Public School in Malaysia. This research used pre-test, post-test, end of treatment session test, observation and interview to collect data and answer the research questions. The findings showed that all instructional methods used had benefitted most of the students. Students' mastery in multiplication topic improved significantly. The findings also indicated that students' level of confidence and self-esteem had increased.

Keywords: Instructional Method, Multimedia Interactive Tool, DI Flashcards, Manipulative Instruction, Mnemonics, Learning Disabilities

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An Investigation on the Bundles from Traditional Turkish Clothing Culture

Miyase Cagdas*

Selcuk University, Turkey

Abstract

In traditional Turkish clothing, there are different ways to store clothes depending on their features and the periods in which they are worn. Bundles that are used to store clothes have some important properties. Some are used in day-to-day life and some others are used on special occasions. The materials and the embroidery techniques vary on the basis of their uses. The purpose of this study is to determine the materials used, the edge-trimming techniques and the embroidery designs and patterns, and it is intended to transfer them to the next generations by documentation. Today, the decline in the use of bundles and the replacement of them with storage bags indicate that bundles may disappear from everyday life, which justifies the necessity of the study. The present study was conducted as survey method and bundles were obtained from special collections in Konya. Observation sheets were developed in accordance with the properties of the bundles. These properties were transferred to the observation sheets and the photos showing their general view and embroidery details were added. Findings were obtained through the dataset from the observation sheets. Observed properties of the bundles were presented in the conclusion section and recommendations were provided for future research.

Keywords: Traditional, Turkish Clothing, Bundles

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A Study into the Features of Handmade Dolls from Argithani Town in Konya Province

Aysel Cagdas*

Selcuk University, Turkey

Abstract

Handmade dolls – a type of handicraft – are among the important values of Turkish culture. Handmade dolls play a major role in the transfer of cultural heritage to the children. The changing economic conditions around the globe bring about many other changes in both productions to consumption habits. Today’s advanced technology has changed individual needs into the needs of masses. The use of the internet has affected the industrialization and the sector of imported toys. The increase in imports has particularly made it possible for children to know about the dolls that reflect the characteristics of foreign cultures. The main purpose of this study is to investigate the materials and the techniques used in the making of handmade dolls that are a part of the culture of Argithani Town located in the Ilgın district of Konya province. The study is significant in the sense of bringing to the agenda the materials and the techniques used in the making of handmade dolls, establishing an environment of discussion and reflection and introducing Turkish culture to children. The study was designed as a survey method. The sample included four handmade dolls obtained through the field research carried out in the houses of Argithani Town. The materials and the techniques used in the making of handmade dolls and the materials used in their accessories were determined with observation sheets. Recommendations were made based on the study findings.

Keywords: Handmade Dolls-Argithani Town, Konya, Turkey

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A Study into the Clothing Features of Folkloric Trinket Dolls Characterizing Turkish Culture

Fatma Ulku Yildiz*

Selcuk University, Turkey

Abstract

Today, the rapid growth in technology, industrialization, the use of internet and the increase in exports have affected the production and promotion of the folkloric trinket dolls that reflect the characteristics of various cultures. Folkloric trinket dolls are important in the sense of introducing Turkish culture in the national and international platforms. The main goal of this study is to determine the materials, the types of clothing, model specialties and the types of accessories that are used in the making of folkloric trinket dolls since it is important to use Turkish clothing culture in the toys industry and hand it down the next generations. This study was designed as a survey model. The sample included four folkloric trinket dolls which were made for touristic purposes and obtained from Antalya in Turkey. Observation sheets were used to collect the research data. The materials, the types of clothing, model specialties and the types of accessories used in the making of folkloric trinket dolls were determined with the observation sheets.

Keywords: Folkloric Trinket Dolls, Turkish Culture, Toys Industry

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Content Analysis of Art and Cultural Open Data on Taiwanese Governmental Websites

**Mei-Hsueh Yang^{*1}, I Ning Chao², Chia-Yu Chen³, Shaw-Anne
Wang⁴**

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Normal University, Taiwan

Abstract

Having open government data is becoming a global tendency. In addition to Taiwanese central government agencies, county governments have also started establishing open data websites to disclose government data for public use. This paper used content analysis to understand the current status of Taiwanese open governmental disclosure of data relating to arts and culture. To understand website structure, application and data relating to arts and culture, this paper divides “Open Government Data Websites” into two parts: basic information and added value. The content analysis table was recorded between September 15th, 2015 and October 19th, 2015. The research results are as follows: 1. Only six websites provided an application for download; of those, four applications have not been updated in over six months. 2. of the various categories in “Open Government Data Websites”, data pertaining to “cultural heritage” are the most numerous. “Artist-in-Residence” and “Book Store” type data are the least numerous. 3. In terms of APP categories, “traditional arts” make up the highest number in open data on Taiwanese governmental websites.

Keywords: Open Government Data, Arts and Culture, Content Analysis

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Economic and Environmental Effects of a Cut of Carbon Emissions in Thailand

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Abstract

According to Thailand's Intended Nationally Determined Contributions (INDC) pledged at the 21st Conference on Climate Change (COP 21), Thailand intends to cut carbon emissions by 20 percent from the projected business-as-usual (BAU) level by 2030. A 2007 SAM for Thailand (EPPO, 2010) originally composes of 79 commodities, 79 productions, two primary factors (labor and capital), ten household income classes, and other national accounts. There are seven types of fossil fuel energy: (1) coal and lignite, (2) diesel, (3) fuel oil, (4) jet fuel and kerosene, (5) natural gas (raw), (6) premium gasoline, and (7) regular gasoline. Important information related to carbon tax schemes, e.g., carbon emission coefficients, carbon emission intensities, specific rates of carbon tax, and ad valorem tax rates for the fossil fuel energy sectors is modeled by adapting a technique of McDougall (1993). A finalized SAM-based CGE model together with necessary parameters such as demand and supply elasticities is then used to simulate the economic and environmental effects of one percent reduction in an annual carbon emissions growth rate. Simulations are implemented under three macroeconomic supply-side closures: (i) inelastic labor and capital supplies (a neo-classical model), (ii) elastic labor and inelastic capital supplies (a neo-Keynesian model), and (iii) elastic labor and capital supplies (a Leontief input-output model). On the macroeconomic demand-side closures, government consumption and public and private investment are exogenously fixed, whereas household consumptions are endogenously adjustable. These specified closures enable us to compare social welfare effects across household income classes and to evaluate the role of labor and capital markets in determining the effects while all other things held constant in a situation where both factors are not fully employed or underutilized, the adverse results of a reduction in carbon emissions become greater.

Keywords: Carbon Tax, Carbon Emissions, Distribution, General Equilibrium, Thailand

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Whose Trades Move Stock Prices? Evidence from the Taiwan Stock Exchange

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Abstract

Even though many existing studies have discussed on the link between investors' trading behavior and stock price changes in developed markets, the price contribution across investor types is so far unclear, particularly for an emerging market. This study focuses on firms listed on the Taiwan Stock Exchange and examines whose trades move stock prices over the sample period from 2010 to 2013. We first investigate the variation of trades and volume across investor types. Then, we explore whose trades move stock prices. Our investor types include foreign investors, mutual funds, other institutions, and individuals. In order to examine the price contribution for each type of investor, we follow O'hara, Yao, and Ye (2014) and Barclay and Warner (1993), regressing the price contribution measure on investor type dummies and percentage of trades. Our empirical results show that foreign investors make much contribution not only to the number of trades, but also to the trading volume. Compared with individuals, institutional investors' trading is associated to information-based trading and considerably moves stock prices.

Keywords: Price Contribution, Information-Based, Stock Price

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Brand Visibility, Cash Flow Stability and Firm Value

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Abstract

Existing literature has shown that consumer perception affects a company's tangible assets, named the brand value. How a company's consumer perception affect customers' purchasing behaviors will lead to the changes in the stability of cash flows of companies. In this paper, we empirically examine whether the relatively famous brands have lower volatility of cash flows. We find top 100 brands revealed by Interbrand have lower volatility over our sample period from 2000 to 2014. At the same time, we test the relationship between the brand visibility and firm value. Specifically, we investigate whether the top 100 brands in the ranking year have higher firm value. Our empirical results present that the top brand ranking is positively associated to the firm value, but only for few months. Finally, we use the logistic model to examine the determinants of the top brands. We find the firm size and financing factors are the key factors in building brands for companies.

Keywords: Brand Visibility, Firm Value, Direct Financing

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Association Rule Discovery from Manufacturing Time-Series Sensor Data

Hoonseok Park¹, Kyuhyup Oh², Aekyung Kim³, Jae-Yoon Jung^{4*}

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Abstract

In this paper, we introduce an application of rule discovery to time-series sensor data which was gathered in die-casting manufacturing process. Deviated events in time-series data are generally of interest in manufacturing process control since they often affect the product quality. To discretize the time-series sensor data and determine the deviated events, the symbolic aggregate approximation is adopted. The deviated events of multiple sensors are used as input of association rule discovery in the manufacturing processing conditions. The real-life dataset of the die-casting manufacturing process is exemplified to illustrate the proposed technique and show the effectiveness in manufacturing time-series sensor data.

Keywords: Smart Factory, Association Rule, Time-Series Sensor Data, Symbolic Aggregate Approximation

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Spatial Movement Pattern Analysis in Public Transportation Networks Using Dynamic Programming

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² Incheon National University

³ Seoul Metropolitan Rapid Transit Corporation

Abstract

Recently, many studies on public transportation systems using big transportation data have been conducted to find travel patterns to analyze citizen's movement behaviors. In this paper, we propose a method of discovering spatial movement patterns from smart card transaction data of multi-modal transportation network of subway and bus. The transaction data contains information including origin and destination (such as bus stops and subway stations), boarding and alighting times, the user type, and so on. To abstract the locations of origin and destination, we adopted the GeoHash coding system, which is a hierarchical geo-coding scheme based on rectangle grid. The adjacent grids which have similar movement behaviors are merged to discover the spatial movement pattern which is composed of two correlated zones. Dynamic programming is also developed to enhance the complexity of the pattern discovery. Spatial movement patterns will be useful in transportation network planning and location-based target marketing.

Keywords: Movement Pattern Analysis, Dynamic Programming, Public Transportation Network

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Comparison of Regression Algorithms for Quality Prediction in Manufacturing Process

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Abstract

Production failure is one of the biggest concerns for every manufacturing company. The production failure may cause a variety of quality costs and lead to production delays. Therefore, one of the most important aims toward smart factory is to develop the quality monitoring system that gives information about upcoming failure of production. In this paper, we deal with a prediction problem of defect rates from manufacturing processing conditions. Representative regression algorithms such as linear regression, non-linear regression and tree-based regression are compared to predict the defective rates for production lots. A real-life dataset of die-casting manufacturing process is used to compare the performance of the regression algorithms. The experimental results show that tree-based regression algorithms generally outperform linear and non-linear regression algorithms. The algorithms can be adopted to implement the quality prediction system for smart factory.

Keywords: Smart Factory, Manufacturing Quality Prediction, Regression Algorithms, Die-Casting

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Practicing Multiplication through Digital and Desktop Card Games

Shih Ying Han^{1*}, Su Mei Teng², Shan Shan Cheng³

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Abstract

For 3rd graders, it is usually not easy to learn multiplication well; especially when learning multiplication table. However, multiplication is one of the most important skills for further learning mathematics. In this study, two card games, one desktop card game and its digital version, were developed for helping students to practice multiplication by playing. After teachers finished teaching multiplication, the desktop card game and its digital version were used in the class and after class. A satisfaction questionnaire was issued to the students, and an interview was given to the teacher. The results revealed that the games motivated the students to practice the multiplication table more. Furthermore, the students liked used the developed card game and digital games to practice multiplication. The results of teacher's interview indicated that integrating the developed card game into teaching effectively influences students' learning multiplication, and it's a good idea to have two games to be used in the class and after class to help students practice multiplication.

Keywords: Digital Game, Desktop Card Game, Multiplication, Learning Mathematics

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Applying Online Material to Help The Elders of Remote Area to Learn Computer

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Abstract

With the increment of the proportion of population aged 65 years and over in Taiwan, the issue of education for the elderly draw government's attention and several learning center were organized especially for the elders. However, for the older adult living in remote area, there were few chances to learn using computers. Therefore, a blended learning method was used to help the elders living in rural area to learn how to use computer and internet. During 12 weeks, the older adults meet the teacher once a week and learned the basic knowledge of computer, and after class, a website with e-learning materials was provided to the older students. This website was specially design for the elder. After 12 weeks of learning computer in the classroom and practice using computer with the help of developed e-learning material, an interview was given to 5 older students who were willing to participate the interview. From the results of the interview, the older participants indicated that they had learned how to use computer and they appreciated the website interface, the content, the font size and color used in the e-learning material. Moreover, the most helpful lessons for them knew how to make an appointment online before going to see a doctor and using skype to contact their relatives living in other cities.

Keywords: Learning Materials, the Elders, Using Computer, Internet, Difficulties of Learning Computer

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Paper Title the More, The Better? -An Analysis of E-Portfolio System Used in University

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Abstract

For 3rd graders, it is usually not easy to learn multiplication well; especially E-portfolio system is a system that allows users to upload their learning outcomes and keep all the learning records, which helps the users to reflect on their own learning and aware how to modify their learning strategies. However, the reality is that the effectiveness of students' usage of e-portfolio system does not match the teachers' and school leaders' expectation. Why do the students not use the e-portfolio system? In this study, we discuss students' usage of an e-portfolio system, and which functions of e-portfolio system they used most and least. A questionnaire, which investigated what functions students used the most and why they used them, was issued to the college students in a university located in northern Taiwan. The results revealed that students intended to use the function which will influence their graduation and for the functions that don't influence their graduation, the students will skip them and do nothing on them. Moreover, the students do prefer the teachers or school system to pour their learning outcomes in the e-portfolio system than they upload their learning outcomes by themselves.

Keywords: E-Portfolio, College Students, Motivation, Usage of E-Portfolio System

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Exploring Students' Perception of Organ Donation and Willingness as Potential Organ Donor in the UK

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Abstract

The United Kingdom has had one of the lowest organ donation rates in the Europe. Thus, increasing the willingness of its people to donate their organ by formally registering themselves as a donor still become an urgent task for the National Health Service – Blood and Transplant (NHSBT) UK. With the large student population within the UK, this research will try to explore student perception and their willingness to register as a potential organ donor, both home-country, and international students. An exploratory qualitative method has been chosen for this study. 30 students from 9 UK universities were involved. Two focus group discussions and fifteen in-depth interviews were conducted during December 2015 to January 2016 with the aim of exploring the main factors that shape the perception of organ donation; student's willingness; main issues that bring fears and uncertainty; which organs that the students want or do not want to donate; and what kind of advertising as part of a marketing campaign that could raise awareness among them. This study suggests that factors such as social, religious, cultural, and health conditions, shape perception of organ donation. All students perceived organ donation as a positive act but were still uncertain with their position because of the uncertainty of the technology used, lack of knowledge, and concern of organ donation within the black-market. Most participants from western countries simply see a dead body as a corpse and have no priority about which organ they are willing to donate or not. This study also indicates that simple and straightforward messages in advertising is most likely to be the best way to catch awareness. Findings of consumer research on this study will be able to provide a basic foundation for creating a marketing campaign to raise awareness about organ donation.

Keywords: Organ Donation; Transplantation; Health Care; Consumer Research; Advertising; Marketing.

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A Political Ecology of Hua Na Dam Hydropower Development Project: Case Study from Social Movement and Local Livelihoods of Villagers in Baan Nong Ong Village, Sisaket, Thailand

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Abstract

Hua Na Dam is one of the Khong-Chi-Mun Hydropower Development Megaprojects with an aim to improve water irrigation and consumption in the region. The project was approved by the cabinet in 1989 and constructed in 1992 without conducting Environmental Impact Assessment and public participation and has certain impacts to local people in terms of natural resources and local livelihoods. This study tries to explain the power relation structure between the government and local people in managing water resources in Hua Na Dam by using a concept of political ecology. This study explores inequalities of natural resources distribution and the struggle of villagers to survive after Hua Na Dam construction by analysing secondary data, conducting in-dept interviews and focus group with local people. The research finds that although the villagers are successful in negotiating with the government about dam's water storage level to protect their village from flooding, they still face other unprecedented dam impacts on local livelihoods, such as fishery, deteriorated community forests, and agricultural land flooding. They need to adapt themselves to survive without any compensation from the government. This study implies that the issues of dam building in Thailand should be focused not only on relocation and compensation, but also local livelihoods. The government should do more to alleviate the dam impacts and promote local livelihoods of local people to have sustainable water governance in the region.

Keywords: Political Ecology, Livelihoods, Hua Na Dam

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Effective Cross-Cultural Interactions: The Role of Communicative Styles and Flexibility of the Frame of Reference

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Abstract

This study aims at identifying conditions of successful cross-cultural interactions and communication patterns of culturally competent communicators. It adds to our understanding of the role of contextual variables, such as length vs. intensity of interaction with a foreign culture and active pursuing of understanding a foreign culture vs. passive acceptance of others. . We conducted a qualitative study with individuals employed by a British insurance company in its two offices: in London, UK, and in Kiev, We then carried out semi-structured interviews with each participant, and combined those with the assessment of employee cross-cultural competence, provided by their managers. Transcripts of the interviews were coded using the thematic analysis approach by two graduate research assistants, blind to the purpose of the study. Common responses were identified by the principal investigators and, consequently, used as categories and interpreted. The results suggest that, in addition to raising awareness to the language and legislative barriers in communication, the organizations can further develop culturally competent communicators, by drawing their attention to the cultural and societal context and by supporting their willingness to embrace it. The most culturally adept employees demonstrated flexibility in their communicative styles, rather than preference to the traditional, culture-bounded, communication styles of their countries – covert and affective vs. factual-inductive. Our results also suggest that contrary to previous findings, exposure to a different culture does not necessarily correspond to the highest level of intercultural sensitivity. Rather, effective employees were ready to shift their frame of reference and were actively seeking a different cultural experience regardless of the length of their tenure with a multinational organization.

Keywords: Cross-Cultural Effectiveness, Communicative Styles, Context

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TRACK B: ENGINEERING AND TECHNOLOGY STUDY



On (Strong) Rainbow Connection Number of Graphs

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Abstract

Most of the graph coloring problems deal with vertices. This paper discussed a kind of edge coloring that adjacent edges may be colored the same. A path P in graph G is a rainbow path if no pair of edges in P has the same color. The minimum number of colors used, for which there exists a rainbow path between every two vertices, is the rainbow connection number $rc(G)$ of graph G . If it is desired that for each pair of vertices, there is a shortest path which is a rainbow path, then the minimum number of colors used to fulfill the condition is the strong rainbow connection number of G , and is denoted as $src(G)$. It is known that for any connected graph G , the value of $rc(G)$ and $src(G)$ must lie between graph diameter and graph size (number of edges). Since tree is the only graph with $rc(G) = |E(G)|$, and there is no graph satisfies $rc(G) = |E(G)|$. This paper also investigated the sufficient conditions for graphs with (strong) rainbow connection number equal to the graph diameter.

Keywords: Rainbow Path, Rainbow Connection Number, Strong Rainbow Connection

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Efficiency of Arithmetic Representation for Intelligent Controllers Implemented on FPGA

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Abstract

In this paper, we propose a hybrid numeric system for hardware implementation of intelligent controllers on field programmable gate arrays (FPGAs). From comparison of the Floating-Point (FLP) and Logarithmic Number System (LNS), complementary trade-offs between computational accuracy and efficiency exist over various mathematical operations. We therefore design a hybrid 32-bit numeric system combining FLP and LNS. The advantages of the hybrid hardware system architecture are: i) minimization of hardware logic element quantity; ii) improved computing efficiency; and iii) more accurate arithmetic operation.

Keywords: Efficiency. Representation, Implemented

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Prediction of Structural Response due to Earthquake Load using Artificial Neural Networks

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Abstract

This study utilizes ANN to predict structural response (story drift) of multi-story reinforced concrete building under earthquake load. Modal response spectrum analysis is performed to simulate earthquake loading and produce structural response data for further use in the ANN. The ANN architecture comprises of 3 layers: an input layer, a hidden layer, and an output layer. Earthquake load parameters from 34 provinces in Indonesia, soil condition, and building geometry are selected as input parameters, whereas story drift is selected as output parameter for the ANN. As many as 2140 data sets are used to train the ANN and 305 data sets for testing. The trained ANN is capable of predicting story drift under earthquake loading at 96% rate of prediction and the calculated Mean-Squared Errors (MSE) as low as 1.2.10⁻⁴. The high accuracy of story drift prediction can greatly assist the engineer to identify the building condition rapidly due to earthquake loads and plan the building maintenance routinely.

Keywords: Artificial Neural Networks, Earthquake Load, Mean-Squared Error, Response Spectrum, Story Drift.

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Estimation of Pile Bearing Capacity of Single Driven Pile in Sandy Soil using Finite Element and Artificial Neural Network Methods

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Abstract

The good estimation of pile bearing capacity, which is derived by end bearing and shaft resistance can be obtained through numerous methods such as empirical, analytical and field test. Thus, application of the methods has been a difficult task due to the uncertainties of various factors related to properties of soil and rock which, unlike other engineering materials, subject to spatial uncertainty. On the other hands performing field tests such as static and dynamic load test is time consuming and expensive, hence the use of finite element and artificial neural networks (ANNs) methods are often of interest. This paper explains the finite element and ANNs methods to estimate the pile bearing capacity in sandy soil. The end bearing and skin resistance capacity of the pile were predicted using stress analysis. The ANNs method used to estimate the bearing capacity by using dynamic load test data. The outputs of finite element modelling were compared with a well-established empirical method for estimation of the ultimate axial bearing capacity of the pile. The results show that finite element and ANNs prediction on the percentage of the ultimate load which is carried by the skin or the shaft of the pile is in close agreement with that of the empirical method.

Keywords: Pile, Bearing Capacity, ANNs, Finite Element Method

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Speech Intelligibility Enhancement Based on Room Equalization in Indoor Noise Environments

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Abstract

Speech intelligibility in listening situations is degraded by reverberation. Room equalization can be used to increase the speech intelligibility by applying the inverse transfer function to the input speech signals. In noise environments, however, it is hard to exactly measure the room transfer function. In this work, we developed the techniques to measure the transfer function in indoor noise environments and to enhance the speech intelligibility by room equalization.

Keywords:: Speech Intelligibility, Room Equalization, Room Transfer Function, Reverberation, Noise Environments

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TRACK C: MEDICAL MEDICINE AND HEALTH STUDY



More Stem Cells Can Be Harvested: An Automated Ex-Utero Cord Blood Collection Device with Clinical Significance

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Abstract

This is a collaboration project between the National University Hospital and Engineering Design and Innovation Centre in National University of Singapore, in collaboration with the only public cord blood bank (Singapore Cord Blood Bank) in Singapore. Hematopoietic Stem Cells (HSCs) transplantation has revolutionized the treatment of fatal hematological, immunological and enzyme deficiency diseases over the past 4 decades. Despite the success, up to 45% of patients have no suitable immunologically compatible donors in local and international registries of available donors. One promising source of HSCs is from Umbilical Cord Blood (UCB), which is usually discarded after delivery of babies. Current methods applied for UCB collection are unable to achieve high yield in an automated manner, which also requires sterility and efficiency at the same time. In this project, a multi-axial rotating structure utilizing a two-axial centrifugal force, with accompanying high speed control methodology, is developed. A fuzzy-based control methodology is used for this structure. Simulation and experimental results will be presented to verify the effectiveness of the proposed approach, to be integrated to the current clinical processes. Analysis as well as recommendations will be given based on test results for future study.

Keywords: Harvested, Significance, Collaboration

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The Empowerment of People Affected by Leprosy through Making Biogas to Increase Productivity and Eliminate the Discrimination of People Affected by Leprosy in Sumber Glagah Village, Indonesia

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Abstract

Leprosy is a chronic disease caused by *Mycobacterium leprae*. It attacks the peripheral nerves thus leading to the impact of disability on other parts such as the eyes and the fingers. It moves very slowly with an average incubation period of the year. Indonesia ranks as the third highest incidence of leprosy. According to Weekly Epidemiological Record published by World Health Organization (WHO) in September, the number of incidents leprosy in Indonesia on 2013 were 18.994 to 16.856 recorded from the previous year. Leprosy can affect many problems such as stigma and discrimination from community, and also particularly got disabilities. United Nations Universal Declaration of Human Rights in 1948 said that everyone, without any discrimination, has the right to equal pay for equal work⁷. Their human rights cannot fulfill because people affected by leprosy are difficult to get a job or employment and then resulting in poverty, as what happened in Sumber Glagah Village. The difficulties of getting a job make people affected by leprosy to be a breeder of cows and goats. The empowerment is involving potential local youth into discussion forum with prominent figure to increase the productivity and eliminate stigma and discrimination of people affected by leprosy in Sumber Glagah Village by making biogas from cow dungs. The earning of fertilizers can be increased the productivity and economy of people affected by leprosy because fertilizers can be sold in Mojokerto, Indonesia. From selling the fertilizers, there is a social support as a result of interaction between local community and people affected by leprosy. Therefore everyone without any discrimination has the right equal to pay for equal work. Stigma and discrimination are against people affected by leprosy can be reduced.

Keywords: Empowerment, Biogas, Increasing Productivity, Eliminating Stigma and Discrimination

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Formulation and Development of Dutasteride/Tamsulosin Pellets Dosage Form for Benign Prostatic Hyperplasia

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Abstract

The objective of the study was to develop the optimum formulation of 0.5-mg dutasteride and 0.4-mg tamsulosin hydrochloride for orally multi-particulate pellets. The core of pellets was prepared by extrusion/spheronization method (tamsulosin hydrochloride) and dutasteride was coated on the pellets by fluidized bed machine. The pellets were evaluated for in vitro drug release to assess in a commercial product, Jalyn® Combo Pill. The high performance liquid chromatography analytical method for dutasteride/tamsulosin hydrochloride pellets has been developed and validated. Dissolution profiles were examined in different media to screen each formulation that should be conducted using a method recommended by the FDA. Comparison of dissolution profiles of each group and capsule were performed using similarity factor f-2 value method to study the difference and similarity. The similarity factor f-2 value of the dutasteride was 97.93 and dutasteride/tamsulosin hydrochloride pellets compare to the commercial product (Jalyn®) was 82.07. In conclusion, the pellets prepared by multi-particulate method were found to be potential candidates for the development generic products of Jalyn® Combo Pill.

Keywords: Dutasteride/Tamsulosin, Extrusion/Spheronization, Pellets, Fluidized bed

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