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**ADJUSTING TOWARD THE APPROPRIATE UNDERPRICING OF
INITIAL PUBLIC OFFERINGS:
EVIDENCE FROM STOCK EXCHANGE OF THAILAND**

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ABSTRACT NOT AVAILABLE

ALPHA-BROMINATION OF LINEAR ENALS AND CYCLIC ENONES

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Key words: α -Bromination, Linear enals, cyclic enone, *N*-bromosuccinimide

In a prior report, α -iodination of cyclic and linear enones was found to be effected by pyridine and stoichiometric iodine. However, with the same combination of iodine and pyridine, refluxing was necessary for reactions of linear enones. For example, (*Z*)-4-iodo-4-hexen-3-one was obtained from *trans*-4-hexen-3-one in 62% yield in boiling acetonitrile. Other α -iodinations of cyclic and linear enones include the use iodine and excess quantities of pyridine, iodine and morpholine, pyridinium dichromate (PDC) with iodine and IN_3 , prepared *in situ* from ICl and NaN_3 . Extending the aforementioned reactions to the bromination of enones is not practical due to the handling difficulties of bromine, and its oxidative nature. Thus milder conditions are required that will tolerate sensitive groups such as an aldehyde in α -bromination reactions. Previous examples of α -bromination involve synthesis of α -bromo analogues of flavones using a combination of iodobenzene diacetate and tetrabutylammonium bromide. Another bromination method involves the use of a rhodium (III) complex and acid halides or benzyl halides, via halogenation of diazodicarbonyl analogues. The same combination was also effective for α -chloroenones.

Herein we report a methodology for the formation of cyclic α -bromo enones and linear enals, which are useful templates for synthesis. Enones or enals are converted directly to their respective α -bromo enones or α -bromo enals using a combination of pyridine-*N*-oxide and *N*-bromosuccinimide (NBS) by stirring in typical organic solvents at room temperature.¹ Unlike the previously reported iodination methodology, which gave excellent yields with pyridine as catalyst, α -bromination is more effective with pyridine-*N*-oxide. α -Halogenations of linear enals were found to proceed with double bond geometry retention.

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AN ANALYSIS OF THE SUCCESS RATES OF PC STUDENTS WHO ENTER THE PRE-COLLEGE PROGRAM THROUGHOUT THE VARIOUS LEVELS (BP-PC IV)

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Key words: Efficacy of academic English preparation programs, Pre-College Program, University/College entrance criteria.

Rationale: The aim of the Pre-College Program is to prepare students for entrance into MUIC or English programs in other universities. Quarter by quarter, students are accepted into the PC Program to study English at various levels from elementary through to advanced depending on their placement results. However, there is no available research data to track PC students who enter at the various levels and their success rate in the advanced level (PC4).

Objective: This paper is an analysis of the success rates of PC students who enter the PC Program at the various levels of study (BP-PC4). The research focused mainly on comparing the pass rates of those students who entered at level 4 to those who entered at the lower levels (BP - PC 3) in academic years 2003-2005. This will help establish the efficacy of PC placement and passing criteria. **Methodology:** The paper is a quantitative analysis of the percentage of students who enter at the various levels of the program and successfully complete PC4 in academic years 2003-2005. The data was collected using existing student records. The students were placed into focus groups according to the level at which they entered the program and the number of required attempts before successfully completing PC4. Codes were assigned to students to represent their individual entry levels and attempts at PC4.

The following is a summary of the coding system used in this study:

The first digit indicates the level at which each student entered the program. The subsequent digits are defined as follows:

10 : successful on their first attempt at PC4	20 : required to repeat PC 4 after first failed attempt
11 : successful on their second attempt at PC4	21 : student asked to leave the program after a second failed attempt
12 : successful on their third attempt at PC4 (student studying with condition)	22 : student asked to leave the program after failing as a condition student
13 : successful after pending TOEFL	23 : student asked to leave the program because he/she did not submit the required TOEFL score within the given 6 month period
	24 : student successfully completed all subjects (R, W, L&S) but unable to achieve the required TOEFL score

Results: Due to the changes to the criteria in college entrance requirements, the data for each study year was different, making it difficult for clear conclusions to be made.

Entrance to the main college in year 2003 was dependent on passing the three skill levels in PC 4 with limited weighting of TOEFL scores. This may have made entrance to the college easier for PC students in 2003.

Entrance to the main college after quarter 3 in year 2004 was dependent on passing PC4 and achieving a minimal TOEFL score of 500 in quarters 1 and 2 and increasing to 520 in quarters 3 and 4.

Due to these changes in TOEFL requirements in 2004 and the necessary transition period affecting the students in the system at that time between quarter 2 and 4, the average passing grade could conceivably have been lower if current students at the time were subject to the same, strict entrance requirements as students later in the same year. With this in mind, it can be concluded that years 2004 and 2005 were fairly similar in terms of the percentage of students entering the program who eventually passed PC4. This also suggests that the PC program aligned itself better with the requirements of the college, which also raised its standards at around the same time. Overall, the results suggest that PC has become harder to pass; however, because of the varying entrance criteria in each study year, a comparison of the results is not possible. In order to assess the true value of this research, further research is needed to analyze the extent to which students from the differing years succeeded upon entering the college and the degree to which PC prepared them for life within an international college environment and the resulting high standards placed upon them.

During the three study years, the data suggests that on average, students who began the program in the elementary levels achieved slightly higher passing rates than those who entered the program in levels 3 or 4.

The comparatively similar success rates of students in each level suggest that PC placement criteria have been effective in placing new students into the correct initial level. This also suggests that the curricula in each level adequately prepares student for subsequent levels, thereby ensuring smooth transition through the levels.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

AN EMPIRICAL STUDY ON EFFECT OF ESTIMATION RISK ON PORTFOLIO RISK

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This study explores effect of estimation risk on an admissible efficient set and an optimal portfolio based on a Bayesian framework assuming diffuse prior and informative conjugate prior distribution functions. Based on the U.S. sectorial index, the result indicated that, when estimation risk is taken into account, the admissible efficient set is not changed. Therefore, three conclusions can be drawn. First, true portfolio returns can be represented by weighted average sample returns given that samples are drawn from high frequency data with a long average period. However, historical sample average is not an efficient estimator for true parameters. Second, portfolio risk or variance, when estimation risk is built into a decision, is affected by a scale factor. Therefore, a Bayesian admissible efficient set will always lie to the right of the traditional admissible efficient set due to higher risk from estimation. Third, portfolio decisions based on a traditional approach, ignoring estimation risk, would lead to a suboptimal portfolio due to utility loss caused by underestimation of risk. Empirical results show that annualized Bayesian portfolio risk is larger than that of a traditional portfolio by approximately 40 to 80 basis points for a weekly index return interval and approximately 100 to 220 basis points for a monthly index return interval. Moreover, the annualized average excess portfolio return from Bayes-Stein shrinkage portfolio is higher than those of traditional, passive, and naïve portfolio by 36, 384, and 144 basis points, respectively.

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BATCH AND CONTINUOUS PACKED COLUMN STUDIES OF CADMIUM BIOSORPTION BY HYDRILLA VERTICILLATA BIOMASS

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Key words: biosorption; *Hydrilla verticillata*; packed column study

The removal of heavy metal ions by the nonliving biomass of aquatic macrophytes was studied. We investigated Cd biosorption by dry *Hydrilla verticillata* biomass. Data obtained in batch experiments indicate that *H. verticillata* is an excellent biosorbent for Cd. Cd was rapidly adsorbed and such adsorption reached equilibrium within 20 min. The initial pH of the solution affected Cd sorption efficiency. Results obtained from the other batch experiments conformed well to those obtained using the Langmuir model. The maximum adsorption capacity q_{\max} for *H. verticillata* was 15.0 mg/g for Cd. The breakthrough curve from the continuous flow studies shows that *H. verticillata* in the fixed-bed column is capable of decreasing Cd concentration from 10 to a value below the detection limit of 0.02 mg/l. The presence of Zn ions affected Cd biosorption. It can be concluded that *H. verticillata* is a good biosorbent for treating wastewater with a low concentration of Cd contaminants.

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BELIEFS ABOUT KNOWLEDGE AND KNOWING OF THAI UNIVERSITY STUDENTS: DIMENSIONS AND DEVELOPMENT OF PERSONAL EPISTEMOLOGY

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Key words: beliefs about knowledge and knowing, undergraduate education, student development, personal epistemology

Objective: The purpose of this study was (a) to investigate the structure and nature of beliefs about knowledge and knowing of Thai university students and (b) to examine whether these beliefs are different among students with different periods of years spent at the university, i.e., first-year and graduating students.

Methods: A 39-item questionnaire, covering the five hypothetical dimensions proposed by Schommer, was administered to 830 students in a Thai university, of which 398 were first-year students and 432 had just completed their undergraduate programs. The participants were asked to indicate how they agree or disagree to 39 statements on knowledge and knowledge acquisition.

Results: Through principal component analysis, five factors of personal epistemology were extracted: Nature and Speed of Learning, Source and Nature of Knowledge, Nature of Successful Learning, Structure of Knowledge, and Stability of Knowledge. The dimensional structure was very complicated, and items covering different hypothetical dimensions were grouped together under one factor. The graduates had significantly epistemologically more developed beliefs about knowledge than the first-year students.

Conclusion: The first finding seems to support the dimensional structure of the personal epistemology held by Thai university students, yet still much more empirical research is necessary to investigate Thai and other Asian students. The second finding suggests that the undergraduate education facilitates the development of perspectives toward knowledge and knowing, provided that these two groups of students share similarities in many aspects. A valid questionnaire instrument needs to be developed considering the socio-cultural contexts of the participants and its psychometric validity.

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BELIEFS ABOUT KNOWLEDGE AND KNOWING OF THAI UNIVERSITY STUDENT: DISCIPLINARY VARIATIONS OF PERSONAL EPISTEMOLOGY

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Key words: Personal epistemology, beliefs about knowledge and knowledge acquisition, learning experiences, domain specificity

Objectives: The purpose of this study was (a) to investigate the structure and nature of beliefs about knowledge and knowing of Thai university students and (b) to examine whether these beliefs are different among students majoring in different areas of study.

Methods: A questionnaire, developed from versions of Schommer's epistemology questionnaire, was administered to 2,203 students who completed already their undergraduate programs in various fields of study in a Thai university. These participants were asked to indicate how they agree or disagree to 39 statements on knowledge and leaning.

Results: Through principal component analysis, four factors of personal epistemology were extracted: Successful Learning and Ability, Complex and Changing Knowledge, Gradual Learning, and Changing Ability and Complex Knowledge. The dimensional structure was very complicated, and items covering different hypothetical dimensions were grouped together under one factor. Significant differences were identified among the groups of students majored in different academic disciplines. Differences between male and female students were also noticed.

Conclusions: The findings seem to support the dimensional structure of the personal epistemology held by Thai university students, but yet still much more empirical research is necessary to investigate Thai and other Asian students. It is very highly likely that the general-type of personal epistemology vary among university graduates with different subject majors. This domain-specificity seems to indicate that students' past educational experiences affect the development of personal epistemology. A valid questionnaire instrument needs to be developed considering the socio-cultural contexts of the participants and its psychometric validity.

(Presented at: The 2007 ISSOTL Conference: Locating Learning: Integrative Dimensions of the Scholarship of Teaching and Learning, 2 - 5 July 2007, Australia)

BIOLOGICAL CONTAMINATION-FREE THAI FROZEN FOOD

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Key words: Protozoa Contamination, Frozen Food

The globalization of Free Trade Agreement (FTA) on food products increases the possibility of more extensive transmission of biological contamination. Hazard Analysis Critical Control Point (HACCP) system was introduced as a tool to prevent protectionistic trade. As a major seafood exporter to various regions of the world, Thailand is considering to include the HACCP system for the frozen food industries. Hazard identification of protozoa was performed in raw materials, food products and water used in the industry in 3 Provinces, namely Samut Sakon, Ranong and Songkla. Raw and treated water samples were collected by large volume technique through a filter with 1 μm nominal porosity. Immunomagnetic separation (IMS) for *Giardia* and *Cryptosporidium* was then applied to eluted and concentrated water. Identifications were individually performed by immunofluorescent and PCR techniques. In raw water, *Giardia* was found in 10, 10 and 60% whilst *Cryptosporidium* was found in 10, 20 and 35% in Samut Sakon, Ranong and Songkla Provinces, respectively. However, no contamination in treated water samples was found. Coli form bacteria was also determined by culture technique, but was not found in any treated water. *Giardia* was also identified in raw materials and food products. The viability of recovered protozoa was analyzed by the reverse transcriptase polymerase chain reaction (RT-PCR). The giardin beta-subunit mRNA gene was selected as the target. Positive RT-PCR for *Giardia* recovered from raw materials and food products indicates viability. The effect of ultra violet light with the concentration of 10 mWs/cm² for 20-100 seconds inactivated viable recovered protozoa, but the sun light exposure was unable to control those viable biohazards.

Information gathering from this study suggested that protozoa are important biological hazard recovered not only from water system, but also from raw materials and final frozen food products. We recommended that the critical control points should be applied in all steps including water system by using ultra violet short exposure time as well as raw material and food product systems by controlling human contamination. Further studies concerning tracing the sources of contamination and an alternative methods, which are more sensitive but simple to carry out on an industrialized scale, are needed.

(Presented at: National Research Council of Thailand, 12 March 2007, Thailand)

BURMA IN THE POST-COLONIAL WORLD ECONOMY IN THE 1950S

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Key words: Colonialism, Insurgency, Economy, Elite competition

This research project aims to look into the political and economic questions that newly independent Burma faced in the 1950s. The impact of the various insurrections and the later KMT intrusion had a devastating impact on Burma's foreign relations and trade. The decline and gradual deterioration of Burma's rice industry started in these years.

This paper is a part of the larger project and starts with a review of the British colonial legacy in Burma. The colonial period had arbitrarily divided Burma into different political and economic zones, which needed to be united in order to create an economically and politically viable state. The economy remained to be dominated by the foreigners – particularly the British. The new leaders of independent Burma were deeply factionalised in competing elite groups and totally incapable in presenting a coherent strategy to tackle the multifaceted problems many of the newly independent countries in Southeast Asia faced in the Cold War period.

The later parts of the project will deal with the KMT intrusion, rice politics, foreign trade, foreign policy and ideological discourses in the late 1940s and 1950s in Burma.

(Presented at: The 2nd International APRU Conference Independence and After in Southeast Asia: Old and New Interpretations, 7-8 August 2007, Malaysia)

CANINE PARASITIC ZONOSSES IN BANGKOK TEMPLES.

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Key words: Canine Parasitic Zoonoses, Thai Temples

Fecal samples were collected from 204 humans and 229 dogs from 20 different temples in Bangkok, as well as communities in the surrounding temple ground areas. Human and dog stool samples were examined for intestinal parasites including *Giardia* using zinc sulfate flotation and microscopy. Hookworms were the most common parasite in dogs (58.1%) followed by *Trichuris* (20.5%), *Isospora* (10%), *Giardia* (7.9%), *Toxocara* (7.4%), *Dipylidium caninum* (4.4%) and *Spirometra* (3.1%). *Blastocystis hominis* (5.9%) was the most common parasite in humans followed by hookworms (3.4%), *Giardia* (2.5%), *Strongyloides* (2%) and *Cryptosporidium* (1.5%). All samples microscopy-positive for *Giardia* were genotyped. The majority of *Giardia* isolated from the dog population was placed in Assemblage A, followed by Assemblages D, B and C, respectively, while human isolates were placed in Assemblages A and B. Therefore, dogs in temple communities posed a potential zoonotic risk to humans for transmission of hookworms, *Giardia* (especially Assemblage A genotypes) and *Toxocara canis*.

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CHALLENGES TO ETHNIC HARMONY IN BURMA: A HISTORICAL OVERVIEW

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Key words: Geo-body, Imagined communities, Mapping

Burma faced independence in 1948 as a deeply divided country. The British had ruled the area, which now was declared as “Union of Burma” in two entirely different administrative systems. The southern parts of the country were taken over gradually after the wars in 1824-1826 and 1852, and became the main geo-body of “Burma Proper” or “Ministerial Burma”. The rest of the country was taken over in a war in 1885-1886, and much of this area was administered indirectly through the local Shan and Kachin chiefs as an administrative entity known simply as “Frontier Areas” or “Scheduled Areas”. Like in the Indian Subcontinent and in the Malayan Peninsula the British administrative arrangements created a serious challenge to the leaders of the new independent country.

Burma Proper was basically populated by the ethnic Burmans, Arakanese, Mons and Delta Karens, whereas the Frontier Areas were populated by the Shan people, Salween Karens, Kachins, Karennis, Chins and various subgroups of the aforementioned. The same year, as the independence was granted, the Union of Burma plunged into a civil war, which continues until today.

This paper discusses the ethnic categories created by the colonial authorities and it looks into how these ethnic categories have been – and continue to be – imagined, invented, manipulated and politicised for economic purposes. The paper is mainly a historical overview but points out a few continuities to the present time. The paper looks into how the Burmese authorities dealt with these issues in the first constitution of 1947 by dividing the country into ethnically based “states” and “divisions”, and how the international community of today continues supporting these ethnic categories.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

COMMUNICATION AND CONSUMERISM IN THE NEW VIETNAM

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ABSTRACT NOT AVAILABLE

COMPARATIVE CHEMICAL CONSTITUENTS AND ANTIMICROBIAL ACTIVITY

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Key words: essential oil, turmeric, gas chromatography and mass spectrophotometer (GC-MS), antimicrobial activities, minimum inhibitory concentration (MIC)

Preservative and antimicrobial role of essential oils extracted from spices and the role of their various components in terms of prevention of food spoilage had been studied. A comparison of the antimicrobial activity of essential oils to that of different antibiotics had also been carried out which might yield significant information as to whether extracts can be employed as replacement of preservatives. Different levels of antimicrobial activity depend on chemical components and their relative amount¹.

Turmeric treated under different conditions (fresh, sun-dried, and oven-dried) were extracted by water distillation and by using a Soxhlet apparatus for 24, 48, and 72 hours to obtain various solvent extracts. The chemical constituents of turmeric oils (*Curcuma longa* L.) and four commercial essential oils: anise (*Pimpinella verum*), clove (*Eugenia caryophyllata*), orange (*Citrus sinensis*), and peppermint (*Mentha x piperita* L.), were then analyzed by gas chromatography and mass spectrophotometer to identify their major constituents. All essential oils were evaluated for their antimicrobial activities on six pathogenic bacteria, two fungi, and one yeast: *Bacillus cereus* ATCC 11778 DMST 5040 (Lot. 1320), *Escherichia coli* ATCC 25922 DMST 4212 (Lot. 1343), *Pseudomonas aeruginosa* ATCC 27853 DMST 4737 (Lot. 1342), *Staphylococcus aureus* ATCC 25923 DMST 8840 (Lot. 1302), *Salmonella typhi*, *Vibrio parahaemolyticus* ATCC 17802 DMST 21243 (Lot. 1312), *Aspergillus niger* ATCC 16404 DMST 15538, *Aspergillus flavus*, and *Candida albican*. Two different methods were employed for the determination of antimicrobial activities: disc diffusion method for screening and broth dilution for minimum inhibitory concentrations (MICs) of the essential oils².

(Poster Presentation in Thailand Research Expo 2007, 7 – 11 September 2007, Bangkok, Thailand)

**CONTESTING BOUNDARIES IN THE RIAU ARCHIPELAGO
RENEGOTIATING BOUNDARIES: LOCAL POLITICS IN POST-
SUHARTO INDONESIA**

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ABSTRACT NOT AVAILABLE

CRISIS COMMUNICATION PLAN: A CASE OF THE NEGATIVE EVENTS IN THAILAND AND EFFECTS ON TOURISM BUSINESSES

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Key words: crisis management, crisis communication, negative events in Thailand

Crisis management strategy has recently become a very critical business concern, particularly when the organizations need to cope with impulsive circumstances such as the natural disasters, the unstable economy, and the acts of terrorism, etc. It is clearly essential to apply the preparedness strategy which leads to effective solutions for the problems arose. This article is centred on how Crisis Communication upon negative events could harmonize the related organisation and generate the impacts to the tourism businesses in case of negative events in Thailand. The tourist purchasing decision was investigated and analysed to see how much media influences the behaviour of the customers in their decision making.

This paper has covered the tourist decision making behavior and its implication. Tourism is a demand-driven industry, and the crises and disasters determine strong fluctuations in the tourism demand. However when digging further into its root, demand was not only affected by the external determinants, the internal determinants also play a very important role. It was found that the number of tourists visiting Phuket after the Tsunami crisis has increased enormously, and this was because the personal determinants of the tourists. Numbers of the tourists who visit Phuket after the Tsunami said that they wanted to come back because they feel related, and connected to the destinations, hotels, and local people. They would like to help and maintain good relationship with people who helped them.

The focus of this research is upon the problems of communication planning and the implementation of the plan before, during, and after a crisis. It was found that large hotels and international chain hotels are well prepared with the Crisis Communication. It was integrated into the firm's marketing strategies using the basic instruments namely product (destination) policy, price policy and distribution policy. The thorough crisis communication plan is more systematic and very well functioned proven by the previous Tsunami Crisis in Phuket in the year 2004. The immediate internal and external crisis communication policies and plans are based on security management and risk management theories. The flow of information within the firm is a significant factor towards the successful of immediate crisis communication management. It could summarise that a good preparation such as training with any crises need to be developed and measured frequently.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

DEMOGRAPHIC REPRESENTATION AND THAI FAMILY VALUES

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Key words: Thailand, family values, demography

As a national institution, the “Thai family” is frequently represented in dichotomous and contradictory terms. Often described as “the basic unit of society” and a principal means of assuring cultural continuity, family is also widely held to have undergone a transformation so radical that it is now virtually unable to perform even the most fundamental of tasks – attending to the material needs of its weakest members, the very old and the very young, while producing enough children to meet the economic demands of society as a whole.

The consensus view, one articulated and affirmed in a range of media reports, academic studies and policy papers, is that the traditional family unit is in near-terminal decline, giving rise to a number of closely related social problems. These concerns have in recent years not only served as a pretext for increased governmental scrutiny and intervention into the realm of family life; they have also been a catalyst for the growth of broader family values movement, a public campaign to strengthen the family unit by actively promoting ‘traditional’ family values and practices.

Of particular interest to me here is the extent to which contemporary understandings of the “traditional Thai family” – and the crisis conditions into which it has fallen - are largely a product of demographic – as opposed to historical, anthropological or ethnographic - representation.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

DESIGNING PUBLIC SPEAKING COURSES FOR SECOND LANGUAGE LEARNERS

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Key words: design and implementation of a public speaking course, basic psychology, audience analysis, persuasiveness of speakers

This presentation will discuss the design and implementation of a public speaking course at Mahidol University International College, Bangkok, Thailand. The original design was based on the need to offer advanced speaking skill courses and to teach debate at a university level. The course has since evolved to incorporate the use of basic psychology and audience analysis to increase the persuasiveness of speakers regarding questions of fact, policy and value. This presentation also discusses some of the problems associated with changes in course design and effectiveness of CD-ROM, DVD, video cameras and internet technologies as tools to demonstrate strong/weak presentation strategies.

(Presented at: The 3rd CAMTESOL, 24-25 February 2007, Phnom Penh, Cambodia)

DIETARY CALCIUM REDUCING EFFECTS OF WATERBORNE LEAD UPTAKE IN NILE TILAPIA (*OREOCHROMIS NILOTICUS*)

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Key words: *oreochromis niloticus*, nile tilapia, lead nitrate, calcium, aminotransferase

This study investigated the influence of dietary calcium supplementation to reduce the toxicity of sublethal lead concentration in Nile tilapia with emphasis on biochemical and histopathological analysis. The values of 24, 48, 72 and 96 h LC₅₀ of lead to tilapia were 247.51, 197.47, 193.36 and 182.38 mg L⁻¹, respectively. Therefore, lead concentration tested in the sublethal experiment was 45 mg L⁻¹, which correspond to 25% of the 96 h LC₅₀. Fish were fed with 0, 20 and 60 mg Ca²⁺ g⁻¹ food for 30 days. In the gills of Pb treatment, edema, lamellar cell hyperplasia, epithelial lifting, lamellar fusion and aneurysm were observed. In the liver, there were blood congestion in sinusoids, vacuolation of hepatocytes and necrosis. In the kidney, glomerulus's atrophy, tubular swelling and also necrosis were seen. The structural damages could be correlated to the significant increase ($p \leq 0.05$) in aminotransferase activities. Fish fed with Ca²⁺ supplemented diets showed slightly alteration when compare the only Pb treatment groups. These results indicated that dietary Ca²⁺ will be protective in reducing Pb burdens in fish exposed to environments contaminated with waterborne Pb.

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DIMENSIONAL STRUCTURE AND VARIATIONS OF PERSONAL EPISTEMOLOGY: BELIEFS ABOUT KNOWLEDGE AND LEARNING OF THAI UNIVERSITY STUDENTS

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Key words: Beliefs about Knowledge, Personal Epistemology, Domain Specificity, Thai Students, Learning, Undergraduate Education

Objectives: The purpose of this study was (a) to investigate the dimensions of the personal epistemology of Thai university students and (b) to examine whether there is any significant difference between groups of students majoring in different disciplines in terms of their personal epistemological perspectives.

Methods: A total of 899 first-year undergraduate students in a Thai university completed a questionnaire, devised from Schommer's original versions, asking the respondents to indicate how they agree or disagree to 39 statements on knowledge and leaning.

Results: Through principal component analysis, four factors of personal epistemology were extracted: Nature of Learning, Nature and Source of Knowledge, Nature of Intelligence and Speed of Learning. However, the structure was not clear cut, and very complicated. Items expected to measure different hypothetical dimensions of these beliefs were merged into one factor. In terms of the four epistemological factors, significant differences were identified between groups of students intending to major in different disciplines. Students majoring in medicine had significantly more epistemologically developed perspectives than prospective engineering majors.

Conclusions: The findings seem to endorse that the personal epistemology held by Thai university students has a dimensional structure, but at the same time indicate the complexity of this construct. They also suggest that students' past educational experiences affect their personal epistemology. This study clarifies that a revised questionnaire needs to be developed considering the socio-cultural contexts of the participants, as already observed by the previous studies investigating Asian students.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

ELEMENTARY THAI CURRICULUM PROJECT

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Key words: Thai Elementary course, Thai writing system, Thai grammar

Objective: The Elementary Thai course will provide the students with skills they can immediately put into practice in day-to-day life and build the basis for further in-depth study of the language. At the same time it must provide flexibility to allow an easy adaptation for specific purposes and intensive language training.

The grammatical progression must be clear and allow a comprehensive command of the specific aspects of Thai grammar. In terms of methodology, the course must make use of innovative foreign language teaching techniques both in the classroom and outside the classroom, making full use of new technologies.

Methods: The materials will be devised based on the curriculum and methodology defined above. Priorities will be set for the order in which these materials will be prepared (textbook and classroom materials first, together with urgently needed material to allow self-study).

Results: As of December 31, 2006, a complete textbook together with a teacher's CD-Rom will be completed. In January 2007 through June 2007, these materials will be revised and finalized and a student CD-Rom developed.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

ENGLISH TUTORING AT MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

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Key words: One Key Service, General Education Program, Encouraging, Learning Activities, The Training, Student tutors, Purpose/Goals, Operation, Management

English tutoring is one key service offered to our students participating in the General Education program. Tutors and students meet in our Resource Center which is a multi-purpose facility encouraging a wide range of learning activities. The presentation will involve the following elements: the training of student tutors, the purpose / goals of our tutoring and the operation and management of the tutoring service. English tutoring has been in existence at MUIC for about six years.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

EVALUATION OF MICRONUCLEUS TEST'S SENSITIVITY IN FRESHWATER FISH SPECIES

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Key words: Micronucleus test, nuclear abnormalities testm, fish, neavy metal

Nile tilapia (*Oreochromis niloticus*), Butterfish (*Poronotus triacanthus*) and Red-tailed tinfoil barb (*Puntius altus*), three fish species inhabiting in Southeast Asia freshwater ecosystems were evaluated for their use as pollution biomarkers using the micronucleus (MN) and nuclear abnormalities (NA) tests in erythrocytes. NA shapes were scored into blebbed nuclei (BL), lobed nuclei (LB), notched nuclei (NT) and binuclei (BN). Fish were exposed to lead (Pb), copper (Cu) and cadmium (Cd) for the period of 24, 48, 72 and 96 h. It was observed that, fish species showed significant sensitivity to the different heavy metals treatment. In general, the highest value of both MN and NA cells were significantly increased in the exposure to Pb followed by Cu and Cd. On the other hand, Nile tilapia was the most sensitive to the three heavy metals exposure. The frequencies of each NA shape were found in the all fish species and in the all treatments as following NT>LB>BN>BL. Results of MN and NA revealed the highest number after 48 h treatment in all cases and decreased within the longer time exposure. Our results demonstrated the suitability of Nile tilapia for genotoxicity of pollution biomarkers using the micronucleus and nuclear abnormalities test.

(Published in: *Research Journal of Environmental Sciences* 1 (2): 56-63, 2007)

FACILE α -HALOGENATIONS OF CYCLIC ENONES AND LINEAR ENALS

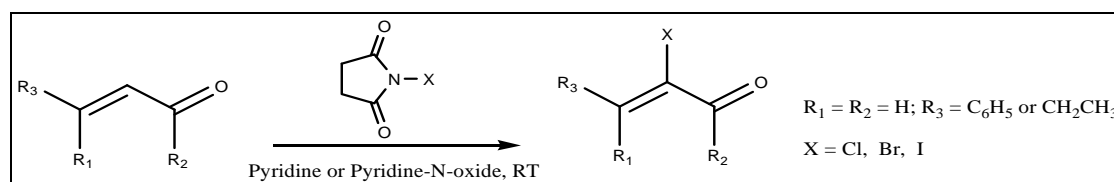
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Key words: α -Halogenations, enones, enals, *N*-halosuccinimides, pyridine, pyridine-*N*-oxide

A facile methodology for the formations of α -chloro, α -bromo and α -iodo cyclic enones and linear enals has been developed. In our method, a combination of pyridine or pyridine-*N*-oxide, and various *N*-halosuccinimides are employed to convert enones or enals in various solvents at room temperature to α -haloenones or α -haloenals.

Previously, α -iodination of enones, both cyclic and linear, could be affected by small amounts of pyridine and stoichiometric iodine.¹ α -Iodination of several cyclic and linear enones were also reported to be effective with combination of iodine and excess quantities of pyridine using carbon tetrachloride as co-solvent.² Other reagents for α -iodination of enones include morpholine,³ and pyridinium dichromate (PDC) and iodine.⁴ With linear enones, the combination of pyridine and I₂ required refluxing acetonitrile to obtain a maximum 62% yield for (*Z*)-4-iodo-4-hexen-3-one.¹ With PDC and iodine, (*E*)-4-hexen-3-one reacted to yield less than 5% conversion to its α -iodo analogue.⁴ Extending the reactions to linear enones and to α -bromination and α -chlorination are limited due to low yields and uses of toxic bromine and chlorine. Previous methods for α -chlorination include hydrochloric acid and *m*-chlorobenzoic acid.⁵ Reagents for α -bromination are iodobenzene diacetate with tetrabutylammonium bromide,⁶ and Rhodium (III) complex combined with acid halides or benzyl halides.⁷



In our general methodology for α -halogenation of both cyclic enones and linear enals, α -halogenations proceeded facily with good to excellent yields and with retention of geometry across the double bond for the linear enals and also with retention of the sensitive aldehyde group.

(Poster Presentation in Thailand Research Expo 2007, 7 – 11 September 2007, Bangkok, Thailand)

FREEDOM TO TALE

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Key words: Shot Fiction, Student Voices, Maximize Benefits

Short fiction affords many benefits to students and teachers; however, while the values of reading short stories are rarely questioned, the values of student written stories, paradoxically, are often trivialized. Sadly, this can silence student voices in terms of what they can express and how they can express what often matters most to them.

This workshop will reveal the development and methodology behind the Creative Writing course at Mahidol University International College, giving insight into how similar courses could be developed at other schools in ways that maximize benefits for students, teachers, and learning institutions, as well as general readers.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

GIARDIA AND CRYPTOSPORIDIUM AS BIOHAZARD IN FROZEN FOOD PRODUCTS

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Key words: *Giardia*, *Cryptosporidium*, Frozen Food

Giardia and *Cryptosporidium* commonly cause food and water-borne disease outbreaks worldwide. They occur in both normal and immunocompromised hosts causing both health and economic burdens. The globalization of Free Trade Agreement (FTA) on food products increases the possibility of more extensive transmission. Hazard Analysis Critical Control Point (HACCP) system at present covers only conventional bacteria. As a major seafood exporter to various regions of the world, Thailand is considering to include those protozoa into the HACCP for the frozen food industries.

Hazard identification of protozoa was performed in raw materials, food products and water used in the industry. Raw and treated water samples were collected by large volume technique through a filter with 1 micrometer (μm) nominal porosity. Immunomagnetic separation (IMS) for *Giardia* and *Cryptosporidium* was then applied to eluted and concentrated water. Identifications were individually performed by immunofluorescent and PCR techniques. In raw water, *Giardia* was found in 42.8-60% whilst *Cryptosporidium* was found in 20-35%, but no contamination in treated water samples was found. *Giardia* was also identified in raw materials and food products. The viability of recovered protozoa was analyzed by the reverse transcriptase polymerase chain reaction (RT-PCR). The giardin beta-subunit mRNA gene was selected as the target. Positive RT-PCR for *Giardia* recovered from raw materials and food products indicates viability. The effect of various concentrations of ultra violet light and difference in duration of solar exposure to control those viable recovered biohazards was studied.

(Presented at: Giardia and Cryptosporidium Conference, 13-18 May 2007, Mexico)

GOAT MILK AND CADDIES: A MUSLIM COMMUNITY IN CHA AM

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ABSTRACT NOT AVAILABLE

GROWTH AND LEAD ACCUMULATION BY THE GRASSES VETIVERIA ZIZANIODES AND THYSANOLAENA MAXIMA IN LEAD-CONTAMINATED SOIL AMENDED WITH PIG MANURE AND FERTILIZER: A GLASSHOUSE STUDY

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Key words: Grass; Lead mine soils; Lead tolerance; Phytostabilization; Soil amendment

Bo Ngam lead mine soils contain high concentrations of lead (up 1% total Pb) and low amounts of organic matter and major nutrients (N, P, K). A glasshouse study was conducted to compare growth performance, metal tolerance and metal uptake by two grasses, *Thysanolaena maxima* (Roxb.) O. Kuntze and four ecotypes of *Vetiveria zizanioides* (L.) Nash, syn. *Chrysopogon zizanioides* (L.) Roberty (three from Thailand: Surat Thani, Songkhla and Kamphaeng Phet, and one from Sri Lanka) and to study the effects of pig manure (20% and 40% w/w) and inorganic fertilizer (75 and 150 mg kg⁻¹) amendments to this lead mine soil. The results showed that both *T. maxima* and *V. zizanioides* (Surat Thani and Songkhla) could tolerate high Pb concentrations in soil (10 750 mg kg⁻¹) and had very good growth performance. Application of pig manure increased electrical conductivity (EC) and reduced DTPA-extractable Pb concentration in the soils. Pig manure application improved the growth of vetiver, especially at 20%, application dosage. Vetiver had the highest biomass. *T. maxima* could not tolerate high EC values. The uptake by roots and transport of Pb to shoots of both species was reduced when soils were amended with pig manure. Application of inorganic fertilizer did not improve growth of vetiver but did improve that of *T. maxima*. Fertilizer application did not have any great influence on the Pb uptake in vetiver while *T. maxima* took up more Pb as a result of the fertilizer enhancing its biomass yield. Both species transported low Pb concentrations to shoots (8.3-179 mg kg⁻¹) and accumulated higher concentrations in roots (107-911 mg kg⁻¹). In summary, both species may be species well suited for phytostabilization in tropical lead mine areas.

(Published in: Chemosphere, Volume 66, Issue 1, January 2007, Pages 45-53)

IMMUNOHISTOCHEMICAL STUDY OF ACUTE AND CHRONIC TOXOPLASMOSIS IN EXPERIMENTALLY INFECTED MICE.

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Key words: Acute and Chronic Toxoplasmosis, Immunocytochemistry

Acute and chronic *Toxoplasma* infections were evaluated in mice using stage specific antibodies and immunocytochemistry. Mice with acute toxoplasmosis were less active, had erectile body hair and seldom took food or water resulting in weight loss. All mice died within 7 days post-inoculation. The immunohistochemical technique enhanced visualization of parasites allowing their distribution to be accurately followed. Following intraperitoneal infection, tachyzoites were initially identified on the surface of the liver and spleen. There was a rapid increase in the number of tachyzoites associated with invasion from the surrounding connective tissue into the organs with formation of inflammatory lesions in the liver. The focal inflammatory lesions showed increasing numbers of tachyzoites with the period post-inoculation. Similar increases in tachyzoites were observed for the spleen. In contrast, only a few individual tachyzoites were seen in the brain at the final time point. In chronic infections, the mice were asymptomatic but tissue cysts containing large numbers of bradyzoites were observed in all brains with the average number of 295 tissue cysts per half brain and the average cystic size of 46.02 +/- 5.08 microm. By histology and immunostaining, the tissue cysts were readily identifiable along with a mild inflammatory cell infiltration into the meninges and perivascular cuffing. Double immunocytochemical labelling confirmed the exclusive presence of tachyzoites during the acute phase and bradyzoites during the chronic phase.

(Published in: Southeast Asian J Trop Med Public Health, 2007;38(2):223-31.)

IMPACT OF THE HOME LITERACY ENVIRONMENT ON THE L1 READING FREQUENCIES OF THAI UNIVERSITY STUDENTS: IMPLICATIONS FOR THE LEARNING OF AN L2.

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Key words: Reluctant Readership, Home Literary Environment, Cross Linguistic Transfer

In the Information Age, reading is a critical skill for accessing information and updating skills. However, reluctant readership in L1 may prevent many societies from fully participating in the global community. This reluctance to read may also slow the acquisition of an L2 such as English.

This paper will present the findings of an MA dissertation which investigated pleasure reading rates in L1 at a Thai university, to understand better the issue of reluctant readership in L2.

Results from a survey of 600 students found that the home literacy environment may account for some of the differences in students' L1 reading frequencies. Though the size effects were only small, parental reading to children, book ownership, and past reading rates of parents, were all found to have significant associations with students' present day reading frequencies and attitudes. Implications for SLA theories and reading strategies in the classroom will be discussed, as will the role of schools in promoting literacy.

(Presented at: the 2nd Biennial International Conference on the Teaching and the Learning of English in Asia (TLEiA2): Exploring New Frontiers, 14-16 June 2007, Malaysia)

IMPROVING PRESENTATION COURSES THROUGH DESIGN AND ASSESSMENT

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Key words: design and implementation of a persuasive speaking, advanced speaking skills, teach debate, effectiveness of CD-ROM, DVD, video cameras and internet technologies

This workshop will discuss the design and implementation of a persuasive speaking course at Mahidol University International College, Bangkok, Thailand. The original design was based on the need to offer advanced speaking skills, courses and to teach debate at a university level. The course has since evolved to incorporate the use of basic psychology and audience analysis to increase the persuasiveness of speakers regarding questions of fact, policy and value. As evaluation of presentations is a subjective matter, this course uses point specific assessment forms which are an integral aspect of improving the quality of presentations. This presentation will also discuss some of the problems associated with changes in course design and effectiveness of CD-ROM, DVD, video cameras and internet technologies as tools to demonstrate strong or weak persuasion strategies.

(Presented at: the 2nd Biennial International Conference on the Teaching and the Learning of English in Asia (TLEiA2): Exploring New Frontiers, 14-16 June 2007, Malaysia)

INFLUENCES OF CADMIUM AND ZINC INTERACTION AND HUMIC ACID ON METAL ACCUMULATION IN *CERATOPHYLLUM DEMERSUM*

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Key words: cadmium, *Ceratophyllum demersum*, humic acid, interactions, zinc

Interactions between Zn and Cd on the accumulation of these metals in coontail, *Ceratophyllum demersum* were studied at different metal concentrations. Plants were grown in nutrient solution containing Cd (0.05-0.25 mg l⁻¹) and Zn (0.5-5 mg l⁻¹). High concentrations of Zn caused a significant decrease in Cd accumulation. In general, adding Cd solution decreased Zn accumulation in *C. demersum* except at the lowest concentration of Zn in which the Zn accumulation was similar to that without Cd. *C. demersum* could accumulate high concentrations of both Cd. and Zn. The influence of humic acid (HA) on Cd and Zn accumulation was also studied. HA had a significant effect on Zn accumulation in plants. 2 mg l⁻¹ of HA reduced Zn accumulation at 1 mg l⁻¹ level (from 2,167 to 803 mg kg⁻¹). Cd uptake by plant tissue, toxicity symptoms and accumulation at 0.25 and 0.5 mg l⁻¹, were reduced (from 515 to 154 mg kg⁻¹ and from 816 to 305 mg kg⁻¹, respectively) by addition of 2 mg l⁻¹ of HA. Cd uptake reached a maximum on day 9 of treatment, while that of Zn was observed on day 15. Long-term accumulation study revealed that HA reduced toxicity and accumulation of heavy metals.

(Published in: *Water Air Soil Pollut*, 2007; 180:225-235)

IN SEARCH OF PREDATORY PRICING STRATEGY IN THE NETWORK INDUSTRY: A MULTIPLE PERIOD EXPERIMENT

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Key words: Predatory pricing; Network externalities; Entry deterrence;
Posted offer market; Firm strategy

This paper reports data from an experiment confirming the existence of predatory pricing in the presence of network externalities when the technology of competing firms are identical. An experiment was conducted based on a seven-period and one-market design. Subjects were recruited and assigned a role as seller before they were paired together randomly and played the game for two rounds. Sellers were classified into superior and inferior sellers where sellers' superiority came from buyers' willingness to pay. Buyers were simulated and had different, pre-programmed preferences over the goods offered by two sellers. In each period, subjects had to make an entry decision and a price decision in a posted offer market institution. The sub-game perfect Nash equilibrium is for superior seller to engage in predatory pricing and for inferior seller not to enter the market. The observations strongly support the presence of predatory pricing. Additionally, the predatory pricing strategy was quite effective in driving rivals out. Unexpectedly, predation was evidently pursued by both superior and inferior sellers, and inferior sellers also had a chance to dominate the market. It can be concluded that predatory pricing strategy exists in the market that exhibits network externalities, and this strategy is quite powerful in eliminating competitors.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

INTERCULTURAL PSYCHOLOGICAL ADAPTATION OF JAPANESE EXPATRIATES LIVING IN THAILAND

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Key words: Psychological adaptation, intercultural adaptation, social support, stress coping strategies, Japanese expatriates

Objective: This study investigated the relationships between their psychological adaptation to the local cultures of Japanese expatriates living in Thailand and other three variables: their self-perceived social support, personal resources, and stress coping strategies.

Methods: Eighty Japanese language instructors of native speakers living and teaching in Thailand completed a questionnaire, measuring various aspects of their intercultural psychological adaptation: self-perceived adaptation, stressors evaluation, local cultural understanding, self-perceived loneliness, and physical and mental health. The questionnaire also measured the other three variables and demographic variables.

Results: Through principal component analysis, three factors of intercultural psychological adaptation were extracted. Three factors of stress coping strategies were also identified. Multiple regression analyses indicated all the three variables examined in this study were significant predictors of at least one of the three factors of intercultural psychological adaptation. Consultation support, leisure support, percentage of satisfied members, and previous teaching period were significant for the general adaptation factor. Thai language proficiency, previous teaching experience outside Japan and replacement coping strategies were significant for the intercultural adaptation factor.

Conclusions: The findings suggest that intercultural psychological adaptation is likely to be facilitated by effective social support, relevant personal resources, and appropriate stress coping strategies.

(Presented at: The 7th Conference of Asian Association of Social Psychology (AASP): Social Psychology: Global Issues and Challenges in a Changing World, 25 - 28 July 2007, Kota Kinabalu, Sabah, Malaysia)

ISSUES IN SECOND LANGUAGE ACQUISITION RESEARCH

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Key words: Second Language Acquisition, language teaching practice

This paper examines five issues within the field of Second Language Acquisition (SLA): the philosophical basis of enquiry, the goals and scope of SLA theory, methodology, the role of context, and the relationship of SLA theory to language teaching practice. Divergent viewpoints on these issues are summarized, discussed and evaluated.

(Published in: Journal of Language and Linguistics, Volume 26, No. 1, July – December 2007, Pages 43-56)

KING MONGKUT'S POLITICAL AND RELIGIOUS IDEOLOGIES THROUGH ARCHITECTURE AT PHRA NAKHON KIRI

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Key words: King Mongkut, Phra Nakhon Kiri, and political ideology

This research investigates King Mongkut's visions of modernity as expressed through the medium of Phra Nakhon Kiri in Phetchaburi. King Mongkut used hierarchically traditional architecture as a means of bolstering national pride and legitimising claims to the right of kingship. Simultaneously, a political position of Siam as a modern state was manifested through the European-Sino-Siamese hybrid architectural styles in the mid-nineteenth century. In addition, the bell-shaped pagoda style within the site complex reflected his religious reform directed at upgrading monastic practices and purifying the canon. His reformed Buddhist sect, Thammayut, is characterised as rational, intellectual, and humanistic. Such religious reform was integrated with scientific knowledge, which he had learned during his contact with the Christian missionaries as a monk and later as the king.

(Published in: Manusaya: Journal of Humanities, 2007; Vol. 10, No.1: 72-88)

MATHEMATICS DISCIPLINE-SPECIFIC PERSONAL EPISTEMOLOGY OF THAI UNIVERSITY STUDENTS: CULTURAL INFLUENCE ON MATHEMATICS-RELATED BELIEFS

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Key words: Beliefs about mathematics, domain specific epistemology, Thai university students

Objectives: The purpose of this study was (a) to investigate the nature of beliefs about mathematics and mathematical problem solving of Thai university students and (b) to examine whether these beliefs are significantly different among students with different cultural and educational backgrounds, mathematics achievements, and subject majors.

Methods: A questionnaire, adapted from the Indiana Mathematics Belief Scales combined with the Fennema-Sherman Usefulness Scale (Kloosterman & Stage, 1992), was administered to 160 Thai undergraduate students who were taking one of the compulsory mathematics courses at a Thai university. The participants were asked to indicate how they agree or disagree to 36 statements on mathematics and mathematics problem solving.

Results: Scale reliability analyses indicated similar results as the other studies using the same instrument, except the two dimensions about word problems. Students graduated from different types of secondary schools differed only at one belief dimension regarding the effectiveness of individuals' efforts in increasing mathematical ability. Students varying in previous mathematics achievements and subject majors were significantly different only at one belief dimension about the usefulness of mathematics. Higher achievers and science majors appreciated mathematics more favorably.

Conclusions: This research demonstrated the reliability of the measurement instrument and its potential applicability to non-Western population such as Thai. The mathematics-related beliefs were likely to be shared among Thai university students, regardless of their different secondary educational type, except the aspect regarding individuals' efforts.

(Presented at: The HERDSA 2007 International Conference: Enhancing Higher Education, Theory and Scholarship, 8-11 July 2007, Australia)

MICRONUCLEUS TEST: THE EFFECT OF ASCORBIC ACID ON CADMIUM EXPOSURE IN FISH (*PUNTIUS ALTUS*)

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Key words: Red-tailed tinfoil barb, *Puntius altus*, ascorbic acid, cadmium, micronucleus test; nuclear abnormalities test

Micronucleus formation in fish cells, as an indicator of chromosomal damage, has been increasingly used to detect the genotoxic potential of heavy metal exposure. This study was investigated the effects of cadmium (Cd) and ascorbic acid (AA) on the red-tailed tinfoil barb (*Puntius altus*) using the micronucleus (MN) and nuclear abnormality (NA) tests for the period of 24, 48, 72 and 96 h. The MN frequencies in the erythrocytes, gill, liver and fin cells were analyzed comparatively to evaluate the sensitivity and suitability of these different cell types. NA shapes in erythrocytes were scored into blebbed nuclei (BL), lobed nuclei (LB), notched nuclei (NT) and binuclei (BN). It was observed that, fish showed significant sensitivity to the different treatments. In general, the highest value of both MN and NA cells were significantly increased in the Cd treated group followed by the combination of Cd and AA treated group. On the other hand, the MN and NA frequencies in erythrocytes were the most sensitive to the treatment and could provide valuable information than those in gill, liver and fin cells. The frequencies of each NA shape in erythrocytes of all treatments were observed in the following NT > LB > BN > BL. Results of MN and NA revealed the highest number after 48 h treatment in all cases and decreased within the longer time exposure. Our results demonstrated the efficacy of AA in reducing genotoxicity in fish induced by Cd. Otherwise; they showed the sensitivity and suitability of MN and NA frequencies in erythrocytes for pollution biomarkers.

(Published in: *Research Journal of Environmental Toxicology* 1 (1): 27-36, 2007)

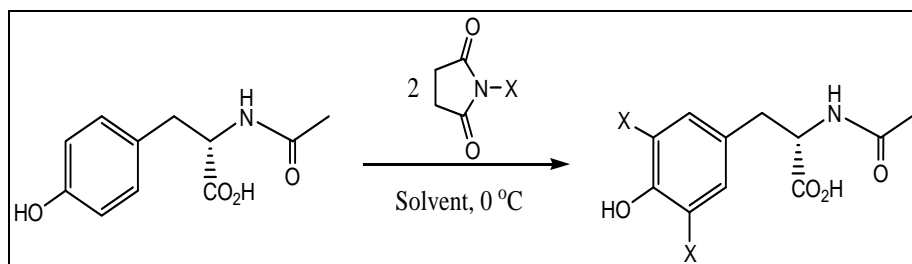
MILD AND FACILE ELECTROPHILIC HALOGENATIONS OF AROMATIC α -AMINO ACIDS

Pakorn Bovonsombat, Pratheep Khanthapura and Michael M. Krause

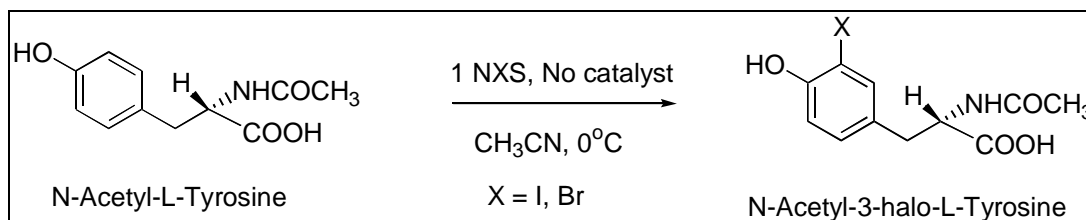
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Key words: N-acetyl-L-tyrosine, N-acetyl-L-phenylalanine, Electrophilic Halogenations, Mild synthesis, Stereochemistry retention, N-chlorosuccinimide, N-bromosuccinimide, N-iodosuccinimide.

Electrophilic ring di-halogenation of N-acetyl-L-tyrosine using 2 equivalents of N-halosuccinimide in the absence of any catalyst afforded N-acetyl-3,5-dihalo-L-tyrosine with good to excellent yields in neutral acetonitrile solution at ambient temperature.¹ The crystal structure of N-acetyl-3,5-dichloro-L-tyrosine is reported herein; showing the retention of the stereogenic centre during the course of the reaction.²



Methodologies for mono-halogenations of N-acetyl-L-tyrosine were studied with the synthesis of N-acetyl-3-chloro-L-tyrosine, which was achieved with excellent conversion and selectivity, as the highlight of this methodology.



Crossed di-halogenations studies in various solvents and reaction conditions of N-acetyl-L-tyrosine were also studied and the results are reported herein.

(Poster Presentation in Thailand Research Expo 2007, 7 – 11 September 2007, Bangkok, Thailand)

MOTIVATION AT WORK OF MUIC FACULTY AND STAFF MEMBERS

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Key word: Motivation of work

Objective: Studying on the motivation at work, and looking for any possibilities and approaches in developing and establishing motivation with MUIC faculty and staff members while working at Mahidol University International College. **Methods:** The research is primarily based on questionnaire. 219 sets questionnaire were distributed to both MUIC faculty and staff members. 175 were returned which was equal to 79.91%. Next, all returned information were carefully analyzed by applying statistical methods. Then, the statistical data was processed. Finally, frequency, percentage, median and standard deviation were calculated. They were also tested by using the T-test and the testing of standard deviation; One-way ANOVA **Results:** According to the research, MUIC faculty mainly weighed the value on interpersonal relationship at most, relation with supervisor, and then respect from colleagues. This finding is also correlated with the one from staff members. Great value on interpersonal relationship played an important role towards them. Staff members also set relation with supervisor as the second important. The third was duties. In addition, from this research personal information of faculty such as, age, highest level of education, division, and different compensation influence extensively towards motivation. Furthermore, the variation is statistically significant. For staff members, personal information such as gender, age, marital status, level of education, years of service, position rank and compensation also play an important role towards motivation. Similar to faculty, the variation is statistically significant.

The researchers come up at the following suggestions;

1. MUIC should have an explicit career path as one of the supports in order to building faculty and staff's motivation.
2. MUIC should revise and/or update the compensation and provide more fringe benefits in order to catch up the changing world.
3. MUIC should be more open and encourage all to take part in establishing the master plan of the college. Listening more to the members' ideas is also mentioned from the samples.

Conclusion: In conclusion, all of the findings from this research should be implemented as a tool in administering the college. It will definitely create a good understanding between the college and the members of the college. In addition, the researchers absolutely believe that all suggestions will encourage and enhance motivation in working. As a result, all members will have a sense of belonging, pride in working at MUIC, and work effectively and productively. Then, MUIC will benefit from these positive attitudes.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

MOTIVATIONAL PSYCHOLOGY AND PUBLIC SPEAKING

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Key words: motivational psychology, public speaking

The workshop will discuss the use of motivational psychology and principles of motivation in relation to public speaking courses. Student motivation is an essential aspect of participation and can be classified according to Henry Murray's Theory of Needs. The use of motivational psychology combined with elements of humanism to encourage and motivate students can be an effective tool for decreasing signs of nervousness and improving overall speaker quality.

(Presented at: International KOTESOL 2007 Conference, 27-28 October 2007, Korea)

NARRATIVE BLUEPRINT

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Key words: Narrative Structure, Character Roles, Narrative Composition,
Vladimir Propp

By the end of the session, participants will have an understanding of narrative structure and character roles, which may be used to develop materials and plan lessons for narrative composition.

A distinct pattern emerges from most narrative texts when the narrative theories of Vladimir Propp are applied. By recognizing these patterns with the help of literature and video, teachers will be able to apply this structure when teaching.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

(Presented at: The 3rd CAMTESOL, 24-25 February 2007, Phnom Penh, Cambodia)

NETWORK EXTERNALITIES AND SPILLOVERS IN THE EMAIL CLIENT SOFTWARE

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Key words: Email client, network externalities, spillovers, firm strategy, predatory pricing, bundling

This paper analyzes adoption decisions of email client software with the focus on network externalities, spillovers, and firms' strategies. Survey data are used to test the existence of network externalities and spillovers by studying the claimed reasons for adoption. Based on the GVV WWW User Survey data in 1997 and 1998, logit models are employed to test hypotheses. The results show that Eudora's competitive advantages were derived from its high quality product which was perceived by users, loyalty which was created from users' prior experience, and network externalities and spillovers which were driven by high market share. Sources of network externalities and spillovers are outside accessibility and others' recommendations, respectively. These advantages diminished when Netscape employed bundling with its suite, and when Microsoft employed bundling with its operating system and free strategies.

(Published in: Suranaree Journal of Science and Technology, 14 (1):25-38, January - March 2007)

NOVEL DRUG COMPOUNDS AGAINST *NEOSPORA CANINUM* AND *TOXOPLASMA GONDII* IN VITRO.

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Key words: Drug testing, *Neospora*, *Toxoplasma*

Neospora caninum has recently been identified as an important cause of abortion in cattle worldwide. This parasite is closely related to *Toxoplasma gondii*. To identify the drug compounds for potential use against both parasites *in vitro*, nine novel drug compounds were incubated with either parasite on microtiter plate. The number of extracellular tachyzoites and the quantities of Vero cells left in the wells after incubating with those nine drugs were compared to the conventional drug control, a combination of sulfadiazine 25 µg/ml and pyrimethamine 0.1 µg/ml. The most effective drugs against both *N. caninum* and *T. gondii* in this study were trifluralin analogues.

(Published in: *Southeast Asian J Trop Med Public Health*, 2007;38 (Suppl 1):15-8.)

OVERCOMING LEARNING BARRIERS: ENCOURAGING WRITING ACROSS THE CURRICULUM

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Key words: Writing Across the Curriculum, Higher Education, Language Learning

“Don’t you teach them anything in English?” This tongue-in-cheek question, posed by colleagues teaching other, subject-based courses, reveals a very real problem in English language courses in an academic environment. The English syllabus may be sound, and the teachers effective, yet students are simply not transferring linguistic or critical thinking skills they have gained, under the guidance of the English department, to other subjects, such as Psychology or Business Management.

This presentation explores barriers to the transfer of these important skills in an international undergraduate programme in Thailand and suggests means of overcoming these obstacles, as implemented by Writing across the Curriculum (WAC) programmes. WAC goes a step beyond content-based writing curricula; it is a dual process that also involves embedding language and critical thinking goals in subject-based courses like Psychology or Business Management.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

PEDAGOGICAL THOUGHTS: EDUCATION, CRITICAL LITERACY, AND CULTURAL IDENTITY IN A DEMOCRATIC SOCIETY

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Key words: critical literacy; cultural identity; literacy and culture

Diverse pedagogical thoughts competing within the cultural milieu of Thailand influence the processes of becoming and being literate. This article is organized around three assumptions. First, it argues that the current crisis of education is symptomatic of a broader crisis in the meaning and practice of democracy. Second, it analyzes the critical relationship between literacy and cultural identity in a multicultural, multiethnic society. Third, it calls for educators to rethink leadership vis-à-vis expanding and deepening cultural democracy. In short, critical literacy is a culturally defined construct; therefore, it follows that it should have close links to cultural identity.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

PERSONAL EPISTEMOLOGICAL DEVELOPMENT DURING THE UNDERGRADUATE EDUCATION: BELIEFS ABOUT KNOWLEDGE AND KNOWLEDGE ACQUISITION OF THAI UNIVERSITY STUDENTS

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Key words: knowledge, knowledge acquisition, personal epistemology, student learning, university undergraduate education, student development

Objectives: This research investigates students' beliefs about knowledge and knowledge acquisition (i.e., personal epistemology) to evaluate how students develop epistemologically during their undergraduate education. **Methods:** Two groups of undergraduate students ($N = 3,050$) in a Thai university completed a questionnaire: first-year students who were about to begin studying in the university ($n = 870$), and students who had just graduated from the university ($n = 2,180$). **Results:** A five-factor structure is identified for the personal epistemology of the students. Significant differences are identified between the first-year students and the graduates in four out of the five factors. The differences between the male and female students are also significant in four out of the five factors. Further separate breakdown analyses by students' subject major indicate that the discrepancies between the first-year and the graduates are more noticeable in some majors than others. **Conclusions:** The research results provide a global picture of the dimensional structure of personal epistemology of Thai university students. Moreover, they also suggest that undergraduate university education has an influence on the students in developing their epistemological viewpoints in certain aspects.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

POMEGRANATE CULTIVAR UT AND BETEL NUTS, GROWN IN THAILAND, HAVE ANTIOXIDANT ACTIVITIES AND POLYPHENOLS CONTENT MORE THAN TRIPLE OF RED WINE

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Key words: Pomegranate, anthocyanins, polyphenols, pomegranate, betel nuts, Thailand

Objective: This study is a screening test for high antioxidants functional beverages and sources of polyphenolic compounds.

Methods: Polyphenols, content was measured as total gallic acid equivalents, antioxidants activities were measured by FRAP and DDPH methods.

Results: We found that the pomegranate cultivar UT from the Royal Project and the betel nuts have high polyphenols content (GAE 3.65 g/L and) and antioxidants activities (35-38 mmol Trolox)

Conclusion: These results suggested that pomegranate cultivar UT have a potential to be functional beverage and betel nuts have a potential to be a good source of antioxidants.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

PREDATORY PRICING WITH THE EXISTENCE OF NETWORK EXTERNALITIES IN THE LABORATORY

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Key words: Predatory pricing; Network externalities; Entry deterrence; Posted-offer market; Firm strategy

This paper reports on data taken from an experiment confirming the existence of predatory pricing in the presence of network externalities, where the technology of one firm (seller A) is superior to the other (seller B). Subjects were recruited to play the game with computer simulated buyers. They made entry decisions as well as both price and quantity decisions in a posted-offer market institution scenario. The Nash equilibrium is that seller A will predate and that seller B will not predate. The experiment looked at both a single-market design and a multi-market design, the latter allowing the reputation of superior sellers to develop, and also providing inferior sellers with an opportunity to escape to another market. The observations from both designs overwhelmingly support the presence of predatory pricing, although a single-market design is not as effective at deterring potential entrants, when compared to a multi-market design.

(Published in: Information Economics and Policy, Vol. 19, No. 2, (2007): 151-170)

PROACTIVE APPROACHES TO COMBATING PLAGIARISM IN UNIVERSITY (EFL) WRITING COURSES

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Key words: Plagiarism, Writing, Course Design, ESL/EFL

This workshop will examine the increasing need, especially with the dramatic rise of on-line sources, for writing instructors to take a more proactive approach towards combating plagiarism. Approaches will focus on three steps: understanding the motivating factors for students (with a special focus on ESL/EFL students) to plagiarize; designing effective course content in order to limit both intentional and unintentional plagiarism; and finally, detecting plagiarized material and dealing with those involved.

(Presented at: the 2nd Biennial International Conference on the Teaching and the Learning of English in Asia (TLEiA2): Exploring New Frontiers, 14-16 June 2007, Malaysia)

(Presented at: International KOTESOL 2007 Conference, 27-28 October 2007, Korea)

RANDOM WALK DOWN THE SET, CAN WE REALLY BEAT THE MARKET USING TECHNICAL ANALYSIS?

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Key words: Market efficiency, Random walk, Technical analysis

This study examines the potential benefit of employing the most commonly used Technical trading strategies on the Thai stock market. The study is based on the Stock Exchange of Thailand (SET) Index over the period of April 1975 to April 2006. Two hundreds and eighty eight different moving average and eighty different trading range break trading models are assessed. The findings reveal the predictive ability of technical trading rules. In the presence of transaction costs which are measured through our new method, results show that both variable-length and fixed-length moving average rules generate extra returns as compared to the buy-and-hold strategy. The trading-range-break rules, even though have return predictability, in some cases underperform the buy-and-hold strategy due to an inability to generate enough return to compensate for the commission fee.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

REACTION FUNCTION UNDER FIXED EXCHANGE RATE SYSTEM

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Key words: exchange rate, capital mobility, monetary policy, macroeconomic goals

The paper presents the viewpoint that the monetary policy reaction function can be constructed when a country adopts the exchange-rate targeting. Though this is different from a common understanding of monetary policy's ineffectiveness, there are a few reasons to believe that the authority still has some freedom in conducting the policy. First, the assumption of perfect capital mobility may be not realistic. Second, even when the authority publicly announces the pegged rate, the promise may not always be kept. Third is when the authority employs a sterilized intervention. To understand how the policy is actually conducted, the reaction function is a simple approach since it shows how a central bank uses the tools to achieve macroeconomic goals. As for the case of Thailand, the function shows that although the Bank of Thailand announced the exchange-rate targeting prior to 1997, the output goal was also pursued as well.

(Published in: NIDA Economic Review, June 2007; Vol.2, No.1, Page 1-9)

**RECENT DEVELOPMENT IN ALKYNOL CHEMISTRY:
ELECTROPHILIC IODONIUM-INDUCED REARRANGEMENTS**

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ABSTRACT NOT AVAILABLE

RESIDUE ANALYSIS OF ORGANOCHLORINE PESTICIDES IN THE MAE KLONG RIVER OF CENTRAL THAILAND

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Key words: DDE; DDT; Distribution; HCHs; Heptachlor; Mae Klong river

The most natural waterways in Thailand are utilized for conventional agricultures, e.g. irrigation and wastewater discharge. Concentrations of 20 organochlorine pesticides (OCPs) were measured in surface sediments collected from the tributaries of the Mae Klong river during 2003-2005. The sampling sites chosen were nearby the rice paddy which organochlorine pesticides were intensively used for crop cultivation. Solid-liquid extraction technique was used for sediment extraction, and gas chromatography with electron capture detector was applied for pesticides determination. Total concentrations of OCPs found were ranged from 4.12 to 214.91 $\mu\text{g g}^{-1}$ dw in the first year. In the second year, total residue concentrations in the surface sediments were in the range of 3.26-215.09 $\mu\text{g g}^{-1}$ dw. Concentrations of pesticides were greater in dry-season rice cultivation period in both sampling years, and heptachlor epoxide was the contaminant found at highest concentration in this study. In addition, the occurrence of some selected contaminants including DDT, DDD and DDE reflects the recent contamination in the study area. This demonstrates not only that the natural waterway was polluted and contained much pesticide residues, but it also illustrates the necessity of a continuous long-term monitoring of the affected environment.

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RESULTS FROM AN OUT-OF-CLASS READING PROJECT

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Key words: Extensive Reading, Pleasure Reading, Academic Writing,
Language Resources

This presentation will describe an out-of-class reading project intended to support a rhetorical writing course at a university where English is the medium of instruction. A review of the literature will look at claims that reading is critical to second language acquisition and some of the issues of 'reluctant readership' will be addressed. The presentation will then outline the writing course syllabus and describe how the project was implemented and the materials used. Finally, it will present the results of questionnaires used to elicit students' opinions of the efficacy of such a reading project on their writing skills.

(Presented at: Thailand TESOL 2007, 26 – 28 January 2007, Bangkok, Thailand)

RETENTION AND RETRIEVAL RATES OF VOCABULARY LEARNING BY EXAM FIXATED WORD LISTS AND LEARNING BOX RELATED FLASH CARDS.

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Key words: acquisition, retention, forgetting and retrieval of vocabulary direct vocabulary learning by word lists and flash cards “Low First Method” spacing effect Learning Box

Abstract: This study will be conducted in order to examine retrieval and recall rates on vocabulary learning. The investigated techniques are exam fixated word lists and Learning Box related flash cards. This box (a dynamic system of storing and reviewing flash card items) has been introduced at MUIC about 3 years ago. However, students’ usage has been inconclusive and advantages over other methods have not been proofed so far by research.

Objective: A first goal is to proof whether research reservations against word list learning are justified. A second goal is to see whether the usage of flash cards and dynamic review systems like the Learning Box are superior to word list learning. A third goal is to provide participating students with better insights into their vocabulary learning capabilities and to advise adaptations.

Methods: In order to gain better insights into this matter, students of 2 intact Elementary German II classes will be tested consecutively for both treatments over a period of 6 – 8 months (3 months in class and delayed post tests afterwards). As variables are impossible to control over such a long period, the study cannot be strictly experimental. It will be a longitudinal case study comprising both qualitative and quantitative approaches. Its design will be within subject, thus each participant will be exposed to both treatments. The main focus will be on retrieval rates of items which have been previously either not recalled (omission error) or wrongly recalled (intrusion error). However, items thoroughly correctly recalled are of less importance, as their reactivation cannot be linked provable to one of the investigated methods.

Results: As the study just has started at January 8 results cannot be presented yet.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

ROLE OF ACADEMIC COUNSELOR IN INTERNATIONAL COLLEGE: A REPORT FROM MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

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Key words: Academic Counselor

Most high school graduates begin international college thinking that they just need to know English and be ready to study more. Only after a few weeks in the first semester, this optimism often turns into disappointment and sometimes a nightmare. Students not only have to study much harder, but they have to study differently. The instructors move at a much faster pace than they used to. Professors expect students to grasp new concepts and connect new information with what they already know and what they must quickly learn by reading English textbooks themselves.

Although admission to Mahidol University International College (MUIC) is very competitive, with an acceptance rate of one out of five to six applicants, we have observed our freshmen struggle to cope with the changes in their lives as well as in their learning habitats. Outstanding students from the school system which requires only memorizing contents of the subject material suffered the most. To help students become better prepared for college lives, MUIC established a comprehensive orientation in the year 2000. All freshmen of each entering group must participate in a rigorous 3-day Freshmen Seminar. They learn about time management, ways that college study differs from high school, how to select their courses, and how to cope with different cultures and stress. Students also learn that plagiarism is a sin, and importantly, they learn where to get help that they need. Thirty students are assigned to one instructor who acts as an advisor through the first year and part of the second year. Despite this preparation, about 7% of students showed difficulty in surviving the first and second years at MUIC.

We have introduced an academic counseling system to help mentoring and monitoring students whose grade point averages (GPA) are slip below 2.25. An academic counselor who is knowledgeable with all programs and courses will follow students study records closely, interview students, and find out if the students really like their major, or they have chosen that subject major because of family or social pressure. Once this task was done, the counselor will make a study plan for each trimester and observe students' performance in that trimester. Other important issues are also brought into consideration, such as, family background, language or cultural difficulties, social or economic problems, involvement in extra curriculum activities, etc. In some case, social counselors and/ or parents are invited to help. This system has proven to be successful as numbers of students who earn GPA below 2.0 have decreased in the past three years, from 7% to 1% per year.

(Presented at: The Six Pan Asian and Thailand TESOL International Conference – Celebrating the first decade of Pan Asian Collaboration : Beyond Boundaries: Teaching English for Global Communication in Asia, 26-28 January 2007, The Imperial Queen's Park Hotel, Bangkok, Thailand)

SMASHING SUBJECT BOUNDARIES: THE CASE FOR WRITING ACROSS THE CURRICULUM IN ASIA

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Key words: Writing Across the Curriculum, Higher Education, Language Learning

The transfer of language skills, such as writing, often poses a challenge in English language courses in an academic environment in Asia. The English syllabus may be sound, and the teachers effective, yet students are simply not transferring writing skills they have gained under the guidance of the English department to other subjects, such as Psychology or Business Management. This presentation considers barriers to the transfer of these important skills in an international undergraduate programme in Thailand and examines the literature in Writing across the Curriculum (WAC) in suggesting means of overcoming these obstacles. WAC goes a step beyond content-based writing curricula; it also involves embedding language and critical thinking goals in subject-based courses like Psychology or Business Management. This presentation addresses these dual concerns: *learning to write*, and *writing to learn* as it builds a rationale for WAC and considers practical ways of implementing such a programme.

(Presented at: The 14th International Conference on Learning, in University of the Witwatersrand, 26-29 June 2007, Johannesburg, South Africa)

SOUTHEAST ASIA IN THE NEW COLD WAR: A SOCIALIST ANALYSIS

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Key words: Southeast Asia, Vietnam, Noam Chomsky

Southeast Asia was the battleground for the longest and most sustained conflicts of the first cold war. Vietnam, Laos and Cambodia actually saw American invasions while Malaysia, the Philippines, Thailand and Indonesia had active insurgencies. According to Noam Chomsky, this cold war occurred because the USA will not allow any country to succeed in an alternate route to development. Now with the retreat of Communism, the US has gotten afraid of another ideology that might seek another route to development that would prove capitalism inadequate. While many Muslim countries are capitalistic, there are provisions in Islam that prohibit some of the most brutal practices of capitalism; usury, exploitation of labor, profiting without adding value and the use of capital to make money. Because of this and because it needs an enemy, the US, with its client states have created a new cold war against Islam. Using Australia as its client in the region, the Americans are fomenting conflict, insurrection and ethnic liberation to maintain control. Again Southeast Asia is a major battleground.

In addition to doing the bidding of its suzerain, America, Australia has imperialistic intentions of its own. Now with its control of the economy and political system of East Timor, its military control of the Indonesian military, its involvement in the Muslim insurgencies in Thailand and the Philippines, Australia is in a position to gain control of the oil and other resources of Southeast Asia. While this is happening, they are building up their military and gladly accepting the role of regional “sheriff” for the American empire.

In this paper, using a Socialist analysis, I will argue that the real enemy of Southeast Asia is Australia with its American overlord and that the Muslim insurgencies play into the hands of these new imperialists.

(Presented at: The 3rd International Malaysia-Thailand Conference on Southeast Asian Studies, 29 November – 1 December 2007, Mahidol University International College, Thailand)

SPORT AND PHYSICAL EXERCISE OF THAI UNIVERSITY STUDENT: INFLUENCE FROM SECONDARY SCHOOLING EXPERIENCES

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Key words: Sport and Physical Exercise, Thai University Students, Influence from Past Experiences

Purpose: The purpose of this study was to investigate the relationship between (a) university students' sports and physical exercise habits and (b) their previous educational experiences.

Methods: A total of 256 students in a Thai university completed a questionnaire, asking respondents to indicate how often and how long they engage in various types of sport and physical exercise. Demographic variables including the type of secondary school were also measured.

Results: Scale reliability analysis demonstrated acceptable Cronbach's alpha values ranging from .660 to .719, for three indexes of sports and physical exercise engagement. The first of these indexes was composed of three scales measuring the frequency of different intensity levels of engagement. The second index covered 12 scales measuring the frequency of each type of engagement (e.g., basketball, badminton, and walking). The last index was the sum of the first two indexes coupled with a scale measuring the weekly hours of engagement. Analysis suggested that students from international schools had significantly more engagement in sport and physical exercise than those who graduated from local Thai high schools. Male students were more significantly engaged in sport and physical exercise than female students. There was no significant interaction between the secondary school type and gender.

Conclusion: The findings seem to indicate that different types of secondary school experiences may influence how university students engage in sport and physical exercise. Students from Thai secondary schools appear to engage less often in these activities than those educated at international schools.

(Presented at: The 24th Universiade Bangkok 2007 FISU Conference, 9-12 August 2007, Thailand)

SUFFICIENCY ECONOMY IN THAILAND: A CASE STUDY OF A BUDDHIST COMMUNITY.

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Key words: Sufficiency, self-sufficiency, self-reliance, Buddhist Economics, Right Livelihood

The paper looks into the concept “Sufficiency Economy” contrasted with related concepts and economic models. The paper starts by discussing some alternative economic models within the context, concentrating particularly on the ideas on “Buddhist Economics”.

The paper analyses a Buddhist group in Thailand, which has practised “Sufficiency Economy” for the past 30 years. Finally, the paper asks, to what extent the model can be transmitted from the community level to the national level.

(Presented at: The 2nd SSREAS Conference 2007 on Syncretism on South and SEA: Adoption and Adaptation, 24 – 27 May 2007, Bangkok, Thailand)

SURVEY OF USER SATISFACTION ON THE OASIS (ONLINE ACCESS TO THE STUDENT INFORMATION SERVICES) SYSTEM

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Key word: User Satisfaction

Objective: The purpose of the study is to examine users' satisfaction on the OASIS (Online Access to Student Information Services) System. The outcomes of the study will be used as a guideline of the development plan to enhance the efficiency of the system. The study was conducted as a survey research focusing on 3 main system users including MUIC students, instructors, and supporting staff.

Methods: The study aimed to examine satisfaction of the system users in the different period of times including before using the system, while using the system, and after using the system. Questionnaires were used for data collection on 5 rating scale basis with comments. Data were analyzed by SPSS program on percentage, means, and standard deviation. The questionnaires collected from the system users consist of 745 questionnaires completed by students, 70 questionnaires completed by instructors, and 29 questionnaires completed by supporting staff.

Results: The result of the study revealed that the level of satisfaction of students, instructors, and supporting staff were on the average. Before using the system, satisfaction level of instructor was the highest comparing to the other group. While using the system, satisfaction level of the supporting staff was the highest comparing to the other group. After using the system, satisfaction level of the student was the highest comparing to the other group. According to the findings of the study, the speed to access to the system should be improved. The system should be able to serve many users at the same time. Moreover, the efficiency of the server should be improved.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

(Presented at: Knowledge Management 2007: the 5th International Conference on ICT and Higher Education, November 21 - 23, 2007: 83-92)

TEACHING PUBLIC SPEAKING: DESIGN AND IMPLEMENTATION

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Key words: teaching public speaking, design, implementation

This paper will discuss the design and implementation of a public speaking course at Mahidol University International College, Bangkok, Thailand. The original design was based on an attempt to shift the general student perception of a presentation from a formula to be memorized to a form of interaction between speaker and audience. Various methods of peer feedback are used in the course. Individual and group evaluations of recorded presentations teach students to objectively analyze and evaluate their own presentation style. This paper also discusses some of the problems associated with changes in course design, and implementation of technologies such as CD-ROM, video and the Internet in the public speaking classroom.

(Presented at: International KOTESOL 2007 Conference, 27-28 October 2007, Korea)

THE CHANGING FACE OF VIETNAM: DOI MOI AS A SOCIALIST APPROACH TO ECONOMIC DEVELOPMENT

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Key words: Vietnam, Hanoi, Socialism

Vietnam is developing in the same direction as are the non-Communist nations of Southeast Asia. In November of 2006, Hanoi hosted the APEC summit where Asia-Pacific heads of state gathered to discuss economic relations. The Ben Thien market of Ho Chi Minh City has the world's most expensive commercial property and Singaporean corporations are investing heavily. This indicates that the Vietnam war was meaningless and wasteful.

In my papers I argue that the USA could not defeat Vietnam so now it is attempting to buy the country. Further I argue that Vietnam is so far able to develop economically and allow foreign investment while protecting workers' rights. They are maintaining Socialist principles in the ear of global development. Lastly, I claim that Vietnam is maintaining socialism better than is China and that the Western condemnation of Vietnam for violation of human rights is a further attempt to discredit Communism and force Vietnam into the Western camp.

(Presented at: The University of Central Arkansas, 3 – 9 April 2007, Arkansas, USA)

THE COMPARISON OF ACHIEVEMENT IN STUDYING OF MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE GRADUATED STUDENTS BETWEEN ACADEMIC YEAR 1989 – 1997 AND 1998 – 2005

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Key words: Achievement in studying

Objectives:

1. To realize the achievement in studying of Mahidol University International College graduated students during the academic year 1989 – 2005 which was the period that Mahidol University International College had been established until the present time.
2. To realize the achievement in studying of Mahidol University International College graduated students compared with the academic year 1989 – 1997 which was the period before Mahidol University International College will be approved to be the authority out of the system under the supervision of the university and during the academic year 1998 – 2005 which was the period after MUIC has already been approved to be the authority out of the supervision of the university.
3. To collect the result of the studying to apply for the development plan of the graduated students in the future.
4. To bring the result from the study enabling the evaluation development.

Methods: “Alter the events” has been used for longitudinal study. Average of the study result of graduated students between the academic year 1989 - 2005 have been collected. The conclusions and comparison of the achievement in studying were categorized in two period, the academic year 1989 – 1997 which was the period before Mahidol University International College will be approved to be the authority out of the system under the supervision of the university, and the academic year 1998 – 2005 which was the period after MUIC has already been approved to be the authority out of the supervision of the university. Subjects were 2,336 graduated students since the academic year 1989 – 2005. The methodology used in this study were Frequency, Percentage, Arithmetic Mean, Standard Deviation and Independent- Sample T.

Results: When testing the average of the study result of the graduated students towards the method in college’s administration (under and out of the university’s supervision), it was found that there was no statistical relationship under the significant level at 0.5.

Conclusion: Method in the College’s administration (under and out of the university’s supervision) has no effect to the achievement of the graduated students but particularly effect to the number of the increasing students.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

THE EFFECT OF ASCORBIC ACID ON CADMIUM EXPOSURE IN THE GILLS OF *PUNTIUS ALTUS*

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Key words: Red-tailed tinfoil barb *Puntius altus*, ascorbic acid cadmium, light microscope scanning electron microscope

The effects of cadmium and ascorbic acid on the gills of Red-tailed tinfoil barb (*Puntius altus*) were compared using light and scanning electron microscopic study for the period 24, 48, 72 and 96 h. The main alterations in the cadmium treated group were edema, filament cell proliferation, lamellar cell hyperplasia, lamellar fusion, epithelial lifting and aneurysm. These changes occurred predominantly in the 96 h treatment. In the combination of cadmium and ascorbic acid treated group, they showed similar alterations as those observed in the cadmium treated alone group but they were less severe.

(Published in: *International Journal of Zoological Research* 3 (2): 77-85, 2007)

THE EXISTENCE AND RATIONALE OF PREDATORY PRICING STRATEGY IN THE NETWORK INDUSTRY: AN EXPERIMENTAL APPROACH

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Key words: Predatory pricing; Network externalities; Entry deterrence; Posted offer market

This paper reports data from an experiment confirming the existence of predatory pricing in the presence of network externalities when the technology of competing firms are identical. An experiment was conducted at the University of South Carolina's Beam Lab, based on a seven-period and one-market design. Twenty-two subjects were recruited and assigned a role as seller. They were paired together randomly and played the game for seven rounds. Pairs of subjects were re-matched between each round to avoid repeated game effects. Buyers were simulated and had different, pre-programmed preferences over the goods offered by two sellers. In each period, subjects had to make an entry decision and a price decision in a posted offer market institution. The sub-game perfect Nash equilibrium is for sellers to engage in predatory pricing during the first four periods and price higher during the last three periods of a round. The observations strongly support the presence of predatory pricing, especially in later rounds. Another finding is that price offers during the last three periods were lower than predicted by sub-game perfect Nash equilibrium due to the fact that the predatory pricing strategy was not effective in eliminating competitors.

(Published in: Chiang Mai University Journal of Social Sciences and Humanities, June 2007; Vol.1, No. 1 Page 49-68)

THE OPINION OF GRADUATES ON STUDENT AFFAIRS

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Key words: Student Affairs, Student Activities, Student Services, Student Survey

Objective: The objective of this research is to study the satisfaction level of MUIC students toward the services of Student Affairs. It will analyze students' the problems and comments toward the department and use the results to improve and develop its services.

Methods: The method used in the research was selecting one observation period of a sample group of 310 fourth-year students. The researchers distributed the questionnaires to the sample group; 293 people responded (95.75%). SPSS was the program used for analyzing the statistics.

The scope of this research was to explore the satisfaction level that the fourth year students have toward Student Affairs' services in 4 categories:

1) Student Affairs in general, 2) services and support for student activities, 3) suggestions and recommendations, and 4) the strengths, weaknesses and opportunities for further development.

Results: The results of the research show that, generally, the majority of respondents were satisfied most with counseling services due to the credibility, reliability and warmth of the counselor. However, there is a problem of inadequate counseling time. As for services and activities, most students gave high marks to the Orientation, especially students are able to adapt themselves to the college's environment and get to know the academic opportunities and the college's system.

Conclusion: Students suggested that Student Affairs should find a new location and have more resources to promote student activities. Student services should include a proper room for medical care and health professionals.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

**THE PRIVATE EDUCATIONAL SECTOR IN THAILAND: EFFECTIVE
MECHANISMS FOR DELIVERING INTERNATIONAL EDUCATION**

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ABSTRACT NOT AVAILABLE

THE STUDY OF SUITABILITY FOR TRAVELING TO MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE

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Key word: shuttle bus

This project was conducted to study these following facts: The necessary in driving personal car to work, Solutions on traffic problem, Data to support the decision whether MUIC should offer the shuttle bus service and the solutions reducing the conflicts on the car park at MUIC. **Methods:** This is questionnaire survey research. All MUIC's faculties, staff and students were enrolled in this study and up to 50% answered our questionnaire. The data were collected and then analyzed by SPSS. **Result:** The average age of studied samples was 21 years, 58.4% were male and 41.6% were female, 73.5% were students, 12% were staff and 14.5% were faculties. Nearly half of them (46.2%) were work or study at the college \leq 20 hours / week. Majority (66.6%) arrive MUIC in the morning. More than half of studied samples (65.3%) drove their own cars using Pinklao-Nakornchaisri road (46%) and parked around MUIC building (40.2%). The average expense for the car's energy is more than 3,000 baht per month. **Conclusion:** Most of studied samples drove to work and spent much money for energy. There was limited parking area around MUIC causing conflict among drivers. Most of them (73.4%), therefore, agreed to the solution of shuttle bus offering on the main routes: Pinklao-Nakornchaisri and Petkesem-Buddhamonton. Information from our study suggested that MUIC should provide mass transportation in the 2 main routes, especially in the morning time.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

UPTAKE AND ACCUMULATION OF CADMIUM, LEAD AND ZINC BY SIAM WEED [CHROMOLAENA ODORATA (L.) KING & ROBINSON]

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Key words: Cadmium; Chromolaena odorata; Lead; Uptake and accumulation; Zinc

The Siam weed, *Chromolaena odorata* (L.) King & Robinson, Family Asteraceae, was found to be a new Pb hyperaccumulator by means of field surveys on Pb soil and hydroponic studies. Plants from field collection accumulated 1377 and 4236 mg kg⁻¹ Pb in their shoots and roots, respectively, and could tolerate soil Pb concentrations up to 100 000 mg kg⁻¹ with a translocation factor of 7.62. Very low concentrations of Cd and Zn were found in plants collected from the field. Under nutrient solution culture condition, *C. odorata* from the contaminated site (CS) and from non-contaminated site (NCS) grew normally with all three metals (Pb, Cd, Zn) supplied. However, the relative growth rates of all treated plants decreased with increased metal concentrations. The percentage uptakes of Pb, Cd, and Zn by *C. odorata* increased with increasing metal concentrations. Pb concentration in shoots and roots reached its highest values (1772.3 and 60 655.7 mg kg⁻¹, respectively) at a Pb supply level of 10 mg l⁻¹. While the maximum concentrations of Cd (0.5 mg l⁻¹) in shoots and roots of *C. odorata* were 102.3 and 1440.9 mg kg⁻¹, and the highest concentrations of Zn (20 mg l⁻¹) were 1876.0 and 7011.8 mg kg⁻¹, respectively. The bioaccumulation coefficients of Pb and Cd were greater than 1000. These results confirm that *C. odorata* is a hyperaccumulator which grows rapidly, has substantial biomass, wide distribution and has a potential for the phytoremediation of metal contaminated soils.

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USE OF PULSE AMPLITUDE MODULATED (PAM) FLUOROMETRY FOR *IN SITU* MEASUREMENTS OF PHOTOSYNTHESIS OF *PORITES LOBATA*, SAMAE SAN, THAILAND. IS THERE EVIDENCE FOR PHOTOINHIBITION AND/OR PHOTODAMAGE?

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Key words: Pulse Amplitude Modulated (PAM) fluorometry; *Porites lobata*; F_v/F_m ; $rETR_{max}$; dynamic photoinhibition

Objective: To determine whether different faces of a large hemispherical shaped *Porites* coral head respond differently to ambient light at different times of the day.

Methods: A portable underwater Diving-PAM fluorometer was used for chlorophyll fluorescence measurements on distinct areas of a large *Porites lobata* coral head (diameter >2.5m) oriented in a north, south, east and west direction. Photosynthetic response to irradiance was measured as rapid light curves (RLCs). From these RLCs a number of parameters were derived. F_v/F_m – the maximum photochemical efficiency of photosystem 2 (PS2) and the relative maximum rate of electron transport at saturating light intensities ($rETR_{max}$). All measurements were carried out at 1000hrs, 1300hrs and 1600hrs over a three day period.

Results: The top surface of the coral showed the lowest F_v/F_m values (e.g. 0.49 on day 1 at 1300hrs) with the north-facing side showing the highest values (e.g. 0.69 day 1 and 2 even at 1300hrs). Although F_v/F_m showed consistent decreases according to orientation and time of day, $rETR_{max}$ showed less consistent variation with time or orientation. The top surface of the coral and the south-facing side showed significantly lower F_v/F_m than other orientations especially at 1300hrs.

Conclusion: Mid-day depression in F_v/F_m with little or no change in $rETR_{max}$ indicates dynamic photoinhibition.

(Presented at: Research Seminar on Research for MUIC Development, 19 January 2007, Mahidol University International College, Thailand)

USING MUIC LIBRARY BY MUIC STUDENTS

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Key words: Library Services, MUIC Library and Library Survey

Objective: The purpose of studying on the feature of how MUIC students use this facility, exploring their attitudes towards the management and the services offered, seeking their suggestions of any additional services and comments. **Methods:** 400 packs of questionnaire were distributed as a tool in collecting data from students. 270 were returned which was equal to 67.50 %. Then, all returned packs were carefully analyzed by applying with related statistical methods. Then, the statistical data was processed by SPSS/PC+. Finally, frequency, percentage, median and standard deviation were calculated. **Results:** According to this study, most users are the second year female students of BBA program with the frequency of visiting library 2-3 times per week. From noon - 2 pm. - block is the peak hour of using library. The first reason of attending library is to borrow and return books and other materials. The second is to use library as a working station. The third and the last is using computers. In terms of materials used in the library, books and electronic resources have been ranked as the most and the second respectively. Students mentioned that the most frequent approach in retrieving information was using Online Public Access Catalog (OPAC). Enquiring from library staff came as the as second. According to the frequent activities done at the library, borrowing and returning books and other materials is the most frequent activity. Using computers and printers is average. However, using Mahidol Library Book Mobile is the least. Furthermore, most students are not familiar with the library's website since they were not informed. Students completely satisfy with the relaxing and friendly ambience, services, and the assistance of the staff library. However, in terms of information technology used in the library was remarked as average. Fairly satisfactory was labeled for the current service hour. However, the additional hour should be given during the exam period. In terms of additional services and facilities, most students ranked as follows, computer sets, space expansion, diversity of books and materials, separate individual and group study room, and service hour's expansion. Additional problems and comments mentioned by the users are as follows, in terms of books and materials; they are limited, obsolete, and inadequate. This applies to computers as well. Reading zone is limited and provided only during the exam period. Noise is another obstacle mentioned. **Conclusion:** In conclusion, all of the findings from this research should be taken into account before the next year plan begins. MUIC Library will play an important role towards the growth of the college. Moreover, it will surely serve as a tool in pushing back the frontier of knowledge. All problems and any obstacles need to be clarified and fixed as soon as possible.

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β,β -DIHALOENONES: CONCLUSIVE STRUCTURAL DETERMINATION BY X-RAY STRUCTURAL ANALYSIS

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Key words: β,β -dihaloenone, stereoselectivity, geometry, hypervalent iodine.

Objective: Determination of absolute structures of various β,β -dihaloenones by means of X-ray diffraction.

Methods: Synthesis of various β,β -dihaloenones by means of iodonium induced rearrangements and X-ray diffraction experiments for absolute structures

Results: Syntheses of (Z)-4-bromo-4-iodo-3-phenyl-3-buten-2-one, 2-[(Z) bromiodomethylidene] cyclohexanone, (Z)-10-(Bromiodoemethylidene) phenanthren-9(10H)-one and 2-[(Z)-bromiodomethylidene]-1,8,8-trimethylbicyclo[3.2.1]octan-3-one accomplished.

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พฤติกรรมผู้บริโภคต่อสินค้าจากสถานที่จัดจำหน่ายผลผลิตมูลนิธิโครงการหลวงในเขต
กรุงเทพมหานคร: สินค้าประเภทผัก สินค้าประเภทแปรรูป และอาหารเสริม

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ABSTRACT NOT AVAILABLE