

**International Academic Multidisciplinary Research Conference 2017**

**Proceeding of**

**INTERNATIONAL BUSINESS ECONOMIC TOURISM SCIENCES TECHNOLOGY  
HUMANITIES SOCIAL SCIENCES AND EDUCATION RESEARCH CONFERENCE**

*Berlin, Germany  
23 – 25 October, 2017*

**THE 2017 ICBTS**



**Edited by Chayanan Kerdpitak, CK Research, Thailand  
Kai Heuer, Wismar University, Germany  
Ebrahim Soltani, Hamdanbin Smart University, UAE  
Gilbert Nartea, Lincoln University, New Zealand  
Vipin Nadda, University of Sunderland, United Kingdom**

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**Conference Proceedings**

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**Conference Three Themes**

*The International Business Tourism and Applied Sciences Research Conference*

*The International Education Social Sciences and Humanities Research Conference*

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# Conference Proceedings

INTERNATIONAL BUSINESS ECONOMIC TOURISM SCIENCES TECHNOLOGY  
HUMANITIES SOCIAL SCIENCES AND EDUCATION RESEARCH CONFERENCE

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## THE 2017 ICBTS

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**ICBTS Institute Conference Center & IJBTS** International Journal of Business Tourism and Applied Sciences

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## INTRODUCTION

We would like to welcome our colleagues to the International Business Tourism Transport Technology Social Sciences Humanities Education Research Conference. It is the seven series in 2016 of Conference on Business Tourism and Apply Sciences was held in Amsterdam. As always many members of the ICBTS 2016 community look forward to meeting, sharing and exchanging their research ideas and results in both a formal and informal setting which the conference provides. Likewise, the concept of alternating the international conference every one month on April to November between Europe and the rest of the world is now well established. This year's event in London (UK) Paris (France) Munich (Germany) Amsterdam (Netherlands) Boston (USA) Toronto (Canada) London (United Kingdom) Zurich (Switzerland) Berlin (Germany) Tokyo (Japan) and another continues with the cultural following the very successful and productive event held in London-Zurich in August 2016 in the field of various types for international academic research conference on Business Economics Social Sciences Humanities Education and Apply Sciences. As usual The ICBTS 2016 brings together leading academics, researchers and practitioners to exchange ideas, views and the latest research in the field of Business Tourism and Apply Sciences.

The theme of this event The 2016 ICBTS International Business Tourism Social Sciences Humanities and Education Research Conference is "Opportunities and Development of Global Business Economics Social Sciences Humanities and Education" It is also represents an emerging and highly challenging area of research and practice for both academics and practitioners a like, The current industrial context is characterized by increasing global competition, decreasing product life cycles, Global Business, Tourism Development, Social Sciences Humanities Education Apply Sciences and Technology collaborative networked organizations, higher levels of uncertainties and, above all, and customers. In our view holding this event in Tokyo represents a timely opportunity for academics and researchers to explore pertinent issues surrounding Business Economics Tourism Social Sciences Humanities Education Sciences and Technology.

Potential authors were invited to submit an abstract to the International Conference Session Chairs. All abstracts were reviewed by two experts from the International review committee and final papers were further reviewed by this volume with 30 contributing authors coming from 18 countries. This book of proceedings has been organized according to following categories:

- Business
- Management
- Marketing
- Accounting
- Financial
- Banking
- Economic
- Education
- Marketing
- Logistics Management
- Social Sciences
- Supply Chain management
- Industrial Management
- Information Technology
- Sciences Technology
- Transport and Traffic
- Tourism Strategic
- Tourism Management
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- Tourism Development Policy and Planning
- Technology Application
- Communication and Sciences
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- Health care Management
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**Professor Dr. Ebrahim Soltani**

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## **SPEAKER BACKGROUND**



**Professor Dr. Kai Heuer**

Prof. Dr. Kai Heuer is full professor for business administration at the Business Faculty of Wismar University in Germany. Before, he served as a full professor at the Environmental Campus of Trier University of Applied Sciences. He studied business administration in Germany and the U.S.A. and holds an MBA and a doctoral degree. He has management experience from leading positions in different companies and as business consultant. His research areas are management accounting, organizational development, and international management where he has published numerous papers, reports and textbooks. He is the head of Master Program in Business at Wismar University and a member of the Schmalenbach-Society for Business Economics, Cologne; managing director of the Institute of Health-, Senior- and Social Management; and a former member of the board of the Centre for Aviation Law and Management.

## **SPEAKER BACKGROUND**



### **Dr. Tariq Khan**

**Dr Tariq Khan** is a Lecturer and Director of Postgraduate Programmes of Business School in Brunel University, Uxbridge, London, United Kingdom. He received his BEng in Aerospace Engineering from Kingston University, his MSc in Manufacturing Technology from University of Warwick, and his PhD in Intelligent Education Systems from University of Salford. He subsequently worked as a research associate in Heriot-Watt University Edinburgh and as a senior lecturer at London Metropolitan University. He has specialist teaching in Business Process Modelling, Web Programming, Software Engineering, Classical Logic, Human Computer Studies. He has Book and published over 20 papers and reports in such journals as Information Systems Evaluation and Integration (ISEing). He supervised a considerable number of PhD theses and is a consultant on business and supply chain and engineering industry in England and United Kingdom.

## **SPEAKER BACKGROUND**



### **Dr. Chayanan Kerdpitak**

**Dr. Chayanan Kerdpitak** is a Lecturer and management committee of Doctor of Business Administration Programmes of College Management Innovation in Valaya Alongkorn Rajabhat University in Thailand and a management committee of CK Research Consultant in Bangkok. I was a Lecturer of Principle Marketing, Sales Management, Consumer Behavior, and Marketing Research at The Suan Dusit University in Thailand. She received a Ph.D. in the field of Business Logistics within Industrial at Ramkhamhaeng University, Thailand. She has published over 20 proceeding paper and some reports in such journals as International Journal Business and Economics Research. She has been a consultant on Import Automobile Industry from Germany for International Marketing and Marketing Research. Chayanan graduated a B.B.A and M.B.A in Business Administration from The Ramkhamhaeng University, Bangkok, Thailand (Major in Marketing).

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Charles Wild	

## 2017 ICBTS CONFERENCE BERLIN PROGRAM

<b>The 2017 ICBTS International Multidiscipline Research Conference</b>	
<b>23 October 17</b> 9.00- 09.30 (M)	<b>REGISTRATION &amp; WELCOME</b> Welcome meeting at The Park Inn by Radisson Berlin City West, Germany
	<b>Academic Advisory &amp; Session Chair</b> Professor Dr. Kai Heuer, Germany Dr. Hen Friman, Israel
<b>23 October 17(M)</b>	<b>Session A</b>
<b>23 October 17(M)</b> 09.00-10.30 (M)	<p><b>Session A1</b></p> <p><b>Paper 1(23)</b> DEVELOPMENT FOR 21<sup>ST</sup> CENTURY SKILLS BY USING PROCESSES OF RESEARCH BASED LEARNING Asst. Prof. Poonyapon Chanfoy</p> <p><b>Paper 2(24)</b> ACTIVE LEARNING BY USING PROCESSES OF PROBLEM BASED LEARNING Asst. Prof. Suphanwadee Waiyaroop</p> <p><b>Paper 3(27)</b> ORGANIZED ACTIVE LEARNING BY INSTRUCTIONAL MODEL WITH PROJECT BASED LEARNING Asst. Prof. Sirimaneer Banjong</p> <p><b>Paper 4(29)</b> PARTICIPATORY LEARNING: FROM THEORY TO PRACTICE IN PSYCHOLOGY FOR TEACHER COURSE Mr. Panuwat Sivaskunraj</p> <p><b>Paper 5(35)</b> PROBLEM-BASED LEARNING WITH MATHEMATICS TEACHING: PRINCIPLES AND GUIDELINES Mr. Teerawit Tinprapa</p> <p><b>Paper 6(132)</b> LANGUAGE TEACHING AND LEARNING OPINIONS ON CULTURAL DIVERSITY Awwal Ibrahim Dansadau</p>
10.31 - 10.45	Morning Break
10.46 - 12.00	<p><b>Session A 2</b></p> <p><b>Paper 1(36)</b> RB : THE DEVELOPMENT OF LEARNERS' LEARNING SKILLS Mrs. Teeraporn Plailek</p> <p><b>Paper 2(37)</b> THE NATURE AND USE OF RESEARCH-BASED LEARNING FOR ENHANCING PRE-SERVICE TEACHERS' RESEARCH SKILLS Dr. Sasiporn Phongploenpis</p> <p><b>Paper 3(33)</b> TECHNIQUE OF FOLLOW UP ON WORK PROGRESS IN OFFICE ADMINISTRATION Miss Nipawan Tharasak</p> <p><b>Paper 4(39)</b> THE STUDY OF TECHNOLOGY ASSISTED OFFICE ADMINISTRATION OF SUANSUNANDHARAJABHAT UNIVERSITY Miss Suntaree Patcharaprateep</p>

	<p><b>Paper 5(144)</b> Examining Motivation to Teach Levels of Pre-Service Teachers in Terms of Some Variables Ipek Som Onal</p>
12.01-13.00	<b>Lunch Break</b>
13.01-15.00	<p><b>Session A 3</b></p> <p><b>Paper 1(9)</b> ACTING AS A TOOL TO EXPRESS POWER OF MEDIUM Dr. Kusuma Teppharak</p> <p><b>Paper 2(10)</b> EQUIPMENT DESIGN TO CREATE TIE-DYE FABRIC PATTERN Mr. Tanutpong Phriwanrat</p> <p><b>Paper 3(11)</b> WICKERWORK PROCESS ANALYSIS APPLY FOR HOME DECORATION DESIGN: PRANEE HANDICRAFT SING BURI THAILAND Mr. Akapong Inkuer</p> <p><b>Paper 4(12)</b> SOUVENIRS DESIGN FROM ARTS AND CULTURAL Mr. Noppadon Sangwalpetch</p> <p><b>Paper 5(13)</b> THAI PERFORMING ARTS IN KING PRAJADHIPOK'S LAWS Asst. Prof. Manissa Vasinarom</p> <p><b>Paper 6(116)</b> ESL Basic Learners: Personal Histories of Writing Ketskanda Jaturongkachoke and Supat Kookiattokoon and Supamit Chanseawrassamee</p> <p><b>Paper 7(150)</b> Feasibility Study of Implementation of Coaching in Training of Nurses in Bahman hospital in Tehran (IRAN) Associate Prof. Dr. Mohammad Ghahramani and Fatemeh Hydari</p> <p><b>Paper 8(127)</b> Renewable Energy by Project-based learning Hen Friman and Idan Halbi and Ifaa Banner and Bosmat Shalom-tuchin and Yulia Einav</p>
15.00- 15.15	<b>Afternoon Break</b>
15.16- 17.00	<p><b>Session A 4</b></p> <p><b>Paper 1(14)</b> FABRIC PRINTING DESIGN OF SARONG AS A RESULT OF A STUDY OF TEXTILE PATTERNS OF LAO-SONG (THAI SONG DAM), SUPHAN BURI PROVINCE Mr. Suwit Sadsunk</p> <p><b>Paper 2(15)</b> THE ART OF THE FABRIC PATTERN DESIGN BY STUDYING THE WOODEN CARVING ON GINGERBREAD IN VIMANMEK MANSION IN THAILAND Mrs. Chanoknart Mayusoh</p> <p><b>Paper 3(17)</b> A WESTERN TREATMENT OF NONWESTERN NATIONAL IDENTITY: A CASE STUDY OF <i>THE KING AND I</i> Asst. Prof. Dr. Chutima Maneewattana</p> <p><b>Paper 4(16)</b> MAINTAINING SIGNIFICANCE OF REALIA IN TRANSLATED PLAY Dr. Nataporn Rattanachaiwong</p> <p><b>Paper 5(40)</b> THE EXPOSURE AND SATISFACTION OF THE GRADUATE STUDENTS FOR THE CHANNAL OF THE INFORMATION AT SUANSUNANDHA RAJABHAT UNIVERSITY Miss Netdao Yooyong</p> <p><b>Paper 6(128)</b> AN EVOLUTION PERSPECTIVE ON THE ROLE OF UNIVERSITIES IN REGIONAL INNOVATION</p>

	<p>Jong-Ho LEE</p> <p><b>Paper 7(124)</b> PLANNING SCHOOL FEEDING POLICY TOWARDS ECONOMIC DIVERSIFICATION IN AFRICA Shuaibu Saminu</p>
23 October 17(M)	<b>Session B</b>
<p><b>23 October 17(M)</b> 09.00-10.30 (M)</p>	<p><b>Session B1</b></p> <p><b>Paper 1(1)</b> “SPIRITUAL TOURISM” THE NEW TOURIST DESTINATION FOR THAI TOURISM CASE STUDY IN “WAT TATON” CHAING-MAI THAILAND Dr. Supakit Mulpramook</p> <p><b>Paper 2 (3)</b> THE STUDY ON MEDIA EXPOSURE BEHAVIOR IN POLITICAL ISSUES OF UNIVERSITY STUDENTS Mr. Veerapon Vongprasert</p> <p><b>Paper 3 (5)</b> THE STUDY OF THE PARTICIPATION OF THE PRESIDENT OF STUDENT COUNCIL ELECTION, UNDERGRADUATE PROGRAM, SUAN SUNANDHA RAJABHAT UNIVERSITY Asst. Prof. Dr. Sudabhorn Arundee</p> <p><b>Paper 4 (8)</b> ROLE OF PROVINCIAL GOVERNOR IN CONTROL OF LOCAL ADMINISTRATION ORGANIZATIONS : CASE STUDY NONGBUALAMPHU PROVINCE Dr. Barameeboon Sangchan</p> <p><b>Paper 5 (18)</b> FINANCIAL STABILITY IN SAMUT SONGKRAM FROM HOUSEHOLD SAVING POTENTIAL Dr. Krisada Sungkhamanee</p> <p><b>Paper 6 (104)</b> THE IMPACT OF “PIPELINE DIPLOMACY” ON CONFLICT RESOLUTION IN THE CAUCASUS-CASPIAN REGION-THE CASE OF AZERBAIJAN AND AFGHANISTAN Dogan Girgin</p>
10.31 - 10.45	<b>Morning Break</b>
10.46 - 12.00	<p><b>Session B 2</b></p> <p><b>Paper 1 (21)</b> HOTEL BUSINESS DEVELOPMENT WAY TO REACH SERVICE STANDARD FOR SUPPORTING SENIOR TOURISTS IN THE AREA OF AMPHAWA DISTRICT, SAMUTSONGKRAM Miss Benjaporn Yaemjamuang</p> <p><b>Paper 2 (22)</b> KNOWLEDGEMANAGEMENT FOR WRITING RESEARCH PROPOSAL Miss Wanvisa Saisanan Na Ayudhaya</p> <p><b>Paper 3 (26)</b> UNIVERSAL DESIGN FOR WARD PATIENTS GOVERNMENT HOSPITAL Mrs. Jitravadee Roongin Kunkar</p> <p><b>Paper 4 (2)</b> THE DIFFERENCES OF SOCIAL AND POPULATION FACTORS TOWARDS TOURISTS’ ATTITUDES TO STAYING AT GREEN HOTELS IN BANGKOK Dr. Rumpapak Luekveerawattana</p> <p><b>Paper 5 (111)</b> MEDIATISATION OF URBAN PLANNING AND THE PUBLIC SPHERE: TOWARDS ENABLING AND JUST PLANNING PROCESS CASE OF EGYPT Mennatullah Hendawy</p>

12.01- 13.00	<b>Lunch Break</b>
13.01-15.00	<p><b>Session B 3</b></p> <p><b>Paper 1 (30)</b> THE DEVELOPMENT OF ONLINE ADMISSION FOR GRADUATE STUDENTS, SUAUN SUNANDHA RAJABHAT UNIVERSITY Miss Khatcharin Thapthimthet</p> <p><b>Paper 2 (28)</b> ORGANIZED ACTIVE LEARNING BY CREATIVE BASED LEARNING Mrs. Chompunuj Limlertmonkol</p> <p><b>Paper 3 (31)</b> KNOWLEDGE MANAGEMENT FOR THE GUIDELINES OF INFORMATION RESOURCE ACQUISITION: A CASE OF ACADEMIC RESOURCE CENTER, SUAN SUNANDHA RAJABHAT UNIVERSITY Acting Sub Lt. Nitima Kaewmanee</p> <p><b>Paper 4 (19)</b> VITAL FACTORS OF RECENTLY GRADUATES FOR APPLYING JOBS IN ASEAN LABOR MARKET Dr. Natnaporn Aeknarajindawat</p> <p><b>Paper 5 (25)</b> KNOWLEDGE MANAGEMENT: GUIDE TO WRITE A RESEARCH PROPOSAL Miss Yanika Chuentako</p> <p><b>Paper 6 (34)</b> KNOWLEDGE ON FOLLOWING-UP AND RECORDING ACCORDING TO PERSONNEL DEVELOPMENT TRAINNING Miss Supassawee Morakul</p> <p><b>Paper 7 (114)</b> AGRICULTURAL TRADE UNDER WTO REGIME: OPPORTUNITIES AND CHALLENGES Dr. MOHD ADIL</p> <p><b>Paper 8 (115)</b> RACE OF RELIGIONS AND THE RICE OF RADICALISM IN WEST PAPUA INDONESIA Umar Werfete and Suparto Iribaram</p>
15.01 - 15.15	<b>Afternoon Break</b>
15.16 - 17.00	<p><b>Session B 4</b></p> <p><b>Paper 1(7)</b> DEVELOPMENT OF A SOLUTION TO THE TRAFFIC ISSUES INSIDE SUAN SUNANDHA RAJABHAT UNIVERSITY Mr. Wichar Kunkum</p> <p><b>Paper 2 (6)</b> THE STUDY OF SATISFACTION OF THE DEVELOPMENT OF GRADE VALIDATION SYSTEM BASED ON CURRICULUM STRUCTURE, UNDERGRADUATE STUDENTS, SUAN SUNANDHA RAJABHAT UNIVERSITY Miss Wanwika Sattaworn</p> <p><b>Paper 3 (32)</b> DEVELOPMENT OF THE “I” SYSTEM FOR THE CORRECTION OF INTERNET LEARNING VIA THE INTERNET SUAN SUNANDHA RAJABHAT UNIVERSITY Miss Pinyaphat Kongsorn</p> <p><b>Paper 4 (38)</b> KNOWLEDGE MANAGEMENT FOR PROCESS DEVELOPMENT: INFORMATION RESOURCES CLASSIFICATION AND CATALOGING IN THE LIBRARY OF SUAN SUNANDHA RAJABHAT UNIVERSITY Miss Supaporn Wongsa</p> <p><b>Paper 5 (4)</b> THE STUDY OF APPLICANTS’ SATISFACTION OF UNIVERSITY ADMISSION SYSTEM : UNDERGRADUATE LEVEL, SUAN SUNANDHA RAJABHAT UNIVERSITY Miss Chontiya Ledanan</p>

	<p><b>Paper 6 (116)</b> THE EFFECTIVENESS OF USING GAMES IN LEARNING ENGLISH VOCABULARY: AN ANALYTIC IN THE SAUDI ARABIAN CONTEXT Ayedh Dhawi Mohammed Almohanna, Saudi Arabia</p> <p><b>Paper 7 (133)</b> SOCIAL MEDIA AND ARABIC: CODE-SWITCHING AMONGST ALGERIAN STUDENTS LIVING IN THE UK Linda Merzougui</p>
<b>24 October 17(T)</b>	<b>Session C</b>
24 October 17 (T) 09.30 – 10.30	<p><b>Session C1</b></p> <p><b>Paper 1(48)</b> GERMAN LEADERSHIP IN EU FOREIGN POLICY AFTER EUROZONE CRISIS? Merve Yavuz</p> <p><b>Paper 2 (7)</b> CULTURAL AND ART EDUCATION: A MEANS FOR SOCIAL STABILITY IN NORTHERN GHANA Dr. Eric Appau Asante and MAVIS DONKOR</p> <p><b>Paper 3 (53)</b> INNOVATIVE ACADEMY PROJECT -DISINFECTION OF EFFLUENTS WITH RENEWABLE ENERGY Hen Friman and Faina Nakonechny</p> <p><b>Paper 4 (61)</b> EDUCATION, BUSINESS AND AGRICULTURE: AN INTEGRATION FOR ECONOMIC TRANSFORMATION IN DEVELOPING NATIONS- THE NIGERIAN EXPERIENCE Dr. Matthew Ojong Achigbe</p>
10.31 – 10.45	Morning Break
10.46 - 12.00	<p><b>Session C2</b></p> <p><b>Paper 1(57)</b> EXPLORING THE EFFECT OF TECHNOLOGY SUPPORTED COLLABORATIVE LEARNING ON CREATIVE THINKING SKILLS OF PRE-SERVICE TEACHERS Erhan ÜNAL and Fatih ÖZDİNÇ</p> <p><b>Paper 2 (64)</b> ASTIN THEORY AND SOCIAL NETWORKS Dr Elham Akbari and prof Hamid Abdollahian</p> <p><b>Paper 3 (50)</b> EFFECT OF PAUL THE PERSIAN'S LOGICAL WORKS ON AL-MANTIQ BY IBN AL-MUQAFFA Seyedmohammadreza Azarkasb</p> <p><b>Paper 4 (136)</b> THE NECESSITY OF REGIONAL ECONOMIC INTEGRATION: A LESSON FOR SOUTH ASIA? Md. Rajin Makhdum Khan and Faizah Imam</p> <p><b>Paper 5 (137)</b> AN INVESTIGATION OF SENSORY LEARNING STYLES USED BY KURDISH EFL STUDENTS AT UNIVERSITY LEVEL Dr. Hoshang Farooq Jawad and Mr. Salahaddin Saeed Khidr</p>
<b>24 October 17(T)</b>	<b>Session E</b>

<p>24 October 17 (T) 09.30 – 10.30</p>	<p><b>Session E1</b>  <b>Paper 1(141)</b> TOURISM STRATEGY IN THE SUN TRIANGLE ANALYSIS WITH THE THEORY BASED ON RESOURCES AND INSTITUTIONAL THEORY  José G. Vargas-Hernández and Lic. Ana Yanetly Arias Orozco, Mexico  <b>Paper 2 (144)</b> CONTRADICTIONS AMONG STUDENTS OF BEING MALES AND FEMALES IN LEARNING ENGLISH AS A FOREIGN LANGUAGE.  Amina Babou, Algeria  <b>Paper 3 (145)</b> THE RELATIONSHIP BETWEEN SYSTEM OF SUGGESTIONS AND THE PRODUCTIVITY OF HUMAN RESOURCES: A CASE STUDY OF TEHRAN PROVINCE GASCO  Ali Aolatshah, Iran  <b>Paper 4 (120)</b> BLEMISHES IN SYLLABUS DESIGNING OF ENGLISH AT PRIMARY LEVEL OF EDUCATION IN PAKISTAN: AN OBSTACLE IN ATTAINING LANGUAGE PROFICIENCY  Zohaib Zahid and Dr Mamuna Ghani, Pakistan</p>
<p>10.31 – 10.45</p>	<p>Morning Break</p>
<p>10.46 - 12.00</p>	<p><b>Session E2</b>  <b>Paper 1 (158)</b> TRAVELING THROUGH THE TOURISM PROMOTION TERMINOLOGY: CONSIDERATIONS UPON THE ADOPTION OF ENGLISH TERMS IN THE OFFICIAL WEBSITES OF ROME, MILAN, LUGANO AND BELLINZONA.  Claudia Maria ASTORINO  <b>Paper 2(31)</b> ADVANCING SUSTAINABLE AGRO-TOURISM IN THE WESTERN BALKANS: INSIGHTS FROM THE KATUN PROJECT  Djurdjica Perovic and Sanja Pekovic andTatjana Stanovcic andJovana Vukcevic, Montenegro  <b>Paper 3 (163)</b> SHARING ECONOMY: THE ESTABLISHMENT OF ORGANIZATIONAL IDENTITY OVERTIME, CONSIDERING IDENTIFY CLAIMS AND LEGITIMACY GRANTING  João Miguel O. Cotrim and Prof. Francisco Nunes  <b>Paper 4 (143)</b> REGENERATING PATRIARCHY: A STUDY ON GEORGE ORWELL'S VIEWS ON WOMEN AND FEMALE CHARATER  Khaled Zouaoui  <b>Paper 5 (154)</b> SATISFACTION OF INDIVIDUAL LEARNING NEEDS IN THE INTEGRATED TEACHING/LERNING MODEL IN PRIMARY SCHOOL  Professor Anita Petere</p>
<p>12.01</p>	<p>Conference Close</p>
<p>23 -24 October 17</p>	<p><b>Participation and Discussion</b></p> <ol style="list-style-type: none"> <li>1. Dr. Mustafa Arslan., Georgia,</li> <li>2. Dr. Dr Olufemi Aramide, Nigeria</li> <li>3. Dr. Asif Iqbal, China</li> <li>4. Professor Wang Zhuquan, China</li> <li>5. Dr. Sumit Kumar dey, India</li> </ol>
<p>25 October 2017</p>	<p>Free day for Participants</p>

# EQUIPMENT DESIGN TO CREATE TIE-DYE FABRIC PATTERN

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## ABSTRACT

The purpose of this research is to explore the tie-dye fabric's information and analyze pattern creation approach in order to have an equipment making's guideline. This study focused on detaining color in a various techniques, the result of staining by the basic technique found that coloration by tying, folding, pinching or even a crease were affect to a part of textile fiber that has been compressed in various approaches. Color is unable to infiltrate into a high density fiber. On the other hand, less compression will cause less color insertion and generate a gradient from dark to light respectively. After the assumption, the researcher designed a pattern-making equipment by using a basic color detaining method as a guideline. The experiment has shown that a tie-dye pattern can be made according to the equipment.

**Keywords:** Design, Equipment, Tie-Dye

## INTRODUCTION

Handicraft product or "CRAFT" is a creation work from human hands. Crafting is becoming more popular. This is evidenced by the significant value of creative industries in handicrafts section, which are worth up to 8.7 billion Baht in 2014. Moreover, the value of Thai handicraft export in decorative, textiles, utensils, and ceramics is worth up to 5.85 billion Baht. These mentioned figures highly grow apart from Thailand's overall economic circumstance, which indicates that handicrafts trend has more popular than before. [1]

Tie-dye fabric from a natural color is an indigenous knowledge which maintains its uniqueness style and color; natural cotton fiber, design process creates a simply pattern and natural color. These knowledge has been passed on generation to generation. But this simplicity identity does not satisfy Thai people as much as it could or make them proud at all. In conversely, it is very popular among foreigners. In these days, most Thai people rarely to see the beauty from natural dye fabric and perceive it as an old-fashioned. [2]

The analysis of handicraft for the future; a human being are a skilled craftsmen who have inherited an indigenous knowledge from the ancestors. There are unique techniques that create an identity of each product, by think outside the box from the old habitude, and focus on telling an important story behind the product in order to have a value-added. In some case, a craftsman's creativity can build on a business by use the combination of inherited knowledge and material with a modern innovation and technology. These approaches generate a gorgeous, applicable, and be more international handicrafts. [3]

Creating new thing with a creative design process and new synthesis. This is a collection of a several existing works that have been synthesized to become a new success. [4]

Product design is part of product development to add value to the product. The word "Product Design" does not mean about the physical product only, but it is also a process design and technique design. Last but not least, an equipment design in order to make a new products and diversified for satisfy consumer's need.

## OBJECTIVES

To study tie-dye fabric techniques or processes in order to design a pattern-making equipment

## METHODOLOGY

The researcher studied a related information from books, journal, conceptual framework and tie-dye researches to analyze. This study has been recorded by notes and recording tool. Divided into two sections; the study of 5 tie-dye basic processes and the experimental of pattern-making equipment which has the step as followings;

### **Step 1.** Study about tie-dye information and product design

The information that the researcher used in this study comes from two sources:

1. Primary Data was collected from the experts by the researcher. The collection has been done by an interviews, questionnaires and observations are the important tool for the data collection in this study.
2. Secondary Data was relevant to this study. The researcher collected from other sources or any other institute has been collected such as reports, researches, thesis, journals, books, newspaper or websites.

### **Tools creation and development**

1. Study the data recorded, documents, books, related researches in tie-dye fabric and product design.
  - 1.1 The researcher studied books, documents and related researches in tie-dye fabric and product design.
  - 1.2 Summarize and record all main content in order to use in pattern-making tools. For the further tie-dye fabric development, the researcher collected data from the study of books, documents, and related researches in the form of notes.
2. Data Analysis

The researcher analyzed the data from the record logs gathered from the studies, books and journal.

Then, summarized as a content analysis.

### **Step 2.** Tie-dye techniques experimental

1. Data Sources
  - 1.1 Documents, books, and related researches in tie-dye fabric.
2. Recording Tool
  - 2.1 Notes

### **Tools creation and development**

A study of tie-dyeing techniques to design a pattern-making tools, the researcher have defined the creating and developing steps as follows;

1. Notes, documents, books, journals and related researches in tie-dye fabric.
  - 1.1 Study the related contents, articles and related researches.
  - 1.2 Summarize the main point and make it as a guideline for an equipment design.
2. Experiment and data collection.
  - 2.1 In this study, data has been collected by recording the study of tie-dye basic process experimental result in a form of notes.
3. Data Analysis
  - 3.1 The researcher analyzed data from the experiment of creating a pattern maker tool. Then, summarize the technique and apply as a design method.

**Step 3. The prototyping procedures**

Summarize the result of the equipment experimental in making tie-dye fabric pattern.

1. Source of information

1.1 Documents, books, articles, journals, related researches in tie-dye fabric and the result from the experiment.

2. Recording data tools

2.1 Notes

The prototyping procedures

Tie-dyeing techniques that have been applied to design a prototype pattern-making tools are defined as following steps;

1. Study the data recorded, documents, books, related researches in tie-dye fabric and product design.

1.1 The researcher studied books, documents and related researches in tie-dye fabric and product design.


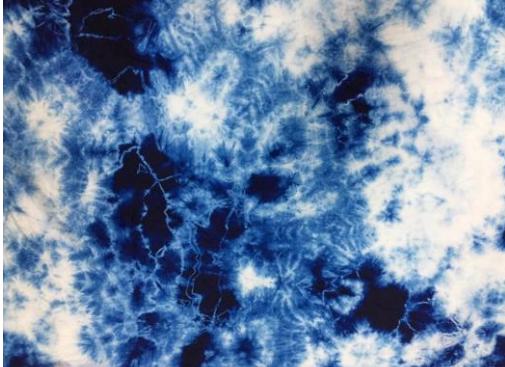
1.2 Summarize and record all main content in order to use in pattern-making tools. For the further tie-dye fabric development, the researcher collected data from the study of books, documents, and related researches in the form of notes.

**Research Findings**


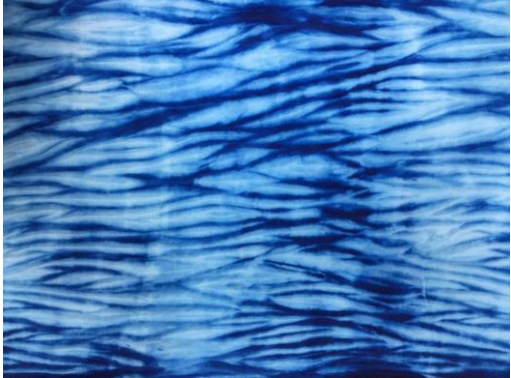
The results of the study and data analysis of 5 basic tie-dyeing techniques are as follows.

**Table 1**


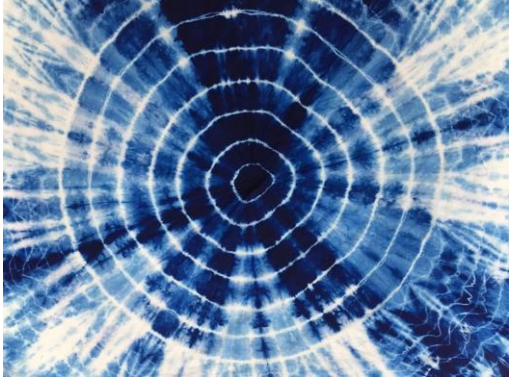
**Table of Scrunched up technique Analysis**

Technique	Results
	


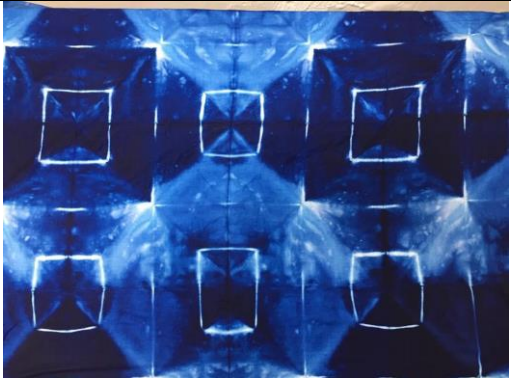
**Table 2**  
**Table of Pull a fabric on the pipe technique Analysis**

Technique	Results
	


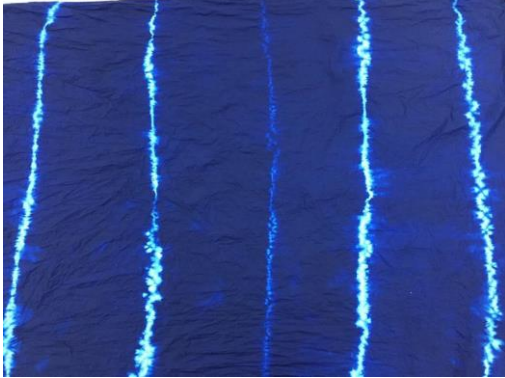
**Table 3**  
**Table of Tie with rubber band and rope technique Analysis**

Technique	Results
	

**Table 4**  
**Table of Folding and pinching technique Analysis**

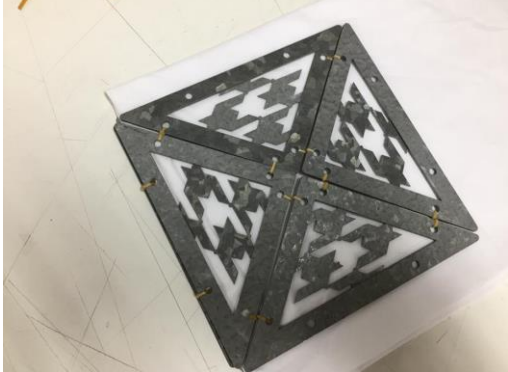
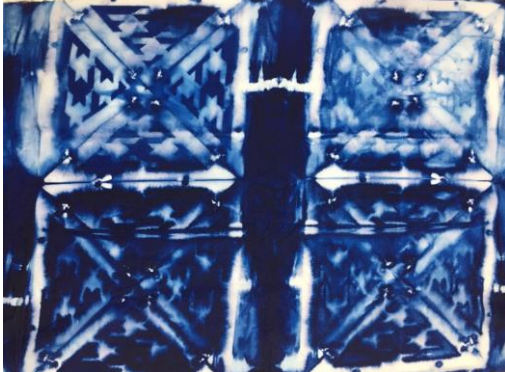
Technique	Results
	

**Table 5**  
**Table of Pulled by a rope technique Analysis**

Technique	Results
	

From the basic experimental study, it was found that the color gradient from dark to light respectively caused from color infiltration capability. These approaches, tying, folding, pinching and making a crease affect to a part of textile fiber that has been compressed.

**Table 6**  
**Table of pattern-making equipment technique Analysis**

Technique	Results
	

Experimental results of design pattern-making equipment

The researcher combined a designed equipment with rubber band because of it has a heat resistant characteristic. After dyeing process, the researcher removed the fabric to see a pattern from the equipment.

#### DISCUSSION

After studied many techniques, the researcher used detaining color by folding and pinching techniques to have an obvious pattern and enough selected space for color insertion. With the design concept of pattern-making tools, it can be assembled into pieces based on the fabric size.

The discussion result found that the researcher can create a tie-dye pattern by using a designed equipment, which is similar to Chanoknart Mayusoh. By using a tying, folding, and pinching techniques to create a pattern but some part did not show obviously as much as it could. Due to the material of a pattern-making

equipment was a metal, which has low flexibility. Thus, the result of fabric compression was not good as it should, causing the color insertion was disorganize. [5]

From the research result, there are the recommendations as below;

1. This study focused on design a pattern-making tools for tie-dye fabric, which be able to apply into creating another pattern.
2. It should have other study in a different techniques and materials for design equipment in order to have more effective.

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- [5] Chanoknart Mayusoh, 2555. Fine art fabric tie-dye pattern design with natural color: Study in category, format, technique and process of pattern design with natural color. 42.