

# The 2<sup>nd</sup> International and National Conference 2020

Multidisciplinary for Innovation Development in 21<sup>st</sup> Century



The Graduate School

**BS**  
**RN** BANSOMDEJCHAOPRAYA  
RAJABHAT UNIVERSITY

March 20, 2021



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81. Dr.Thannapaporn Hongthong, Bansomdejchaopraya Rajabhat University, Thailand
82. Dr. Chaiyawit Muangmee, Bansomdejchaopraya Rajabhat University, Thailand

## Quick Glance of Oral Presentations

<b>International Oral Session (Inside presentation)</b> <b>Venue: The meeting room, Building 6, Floor 13, Time: 1:00 p.m. – 5.15 p.m.</b>	
<b>1. Antecedents of Customers Purchase Intention of Residential Condominium: a Case Study of a Property Developer in Bangkok, Thailand</b> <i>Qin Ning, Sasithorn Suwandee, Chairat Suriyapa, Felicito Jabutay</i>	p.29 (1.00-1.15 p.m.)
<b>2. Using Game Based Learning Platform “KAHOOT” to Motivate Students’ Reading Comprehension</b> <i>Choosri Banditvilai</i>	p.29 (1.15-1.30 p.m.)
<b>3. Inter-organizational Collaboration of Multidisciplinary Network: A Qualitative Study</b> <i>Thongchai Jitmitsumphon, Piyanart Chatiket, Kittithach Mongkolsiwa</i>	p.30 (1.30-1.45 p.m.)
<b>4. The Development of Application on Android Smartphone for Medical Equipment Registration in WepMEt Information System</b> <i>Nutdanai S., Teerawit A., Amonrat K, Kanlaya T.</i>	p.30 (1.45-2.00 p.m.)
<b>5. Development of Gypsum Broad Mixed with Water Hyacinth and Portland Cement Type1 for Environmental-Friendly</b> <i>Kittiphon Boontositrakul, Pramot Weeranukul, Kittipong Suweero</i>	p.30 (2.00-2.15 p.m.)
<b>6. Sustainable Performance in Private Vocational Colleges Organizational of Thailand</b> <i>Waragorn Petchroong, Tanapol Kortana, Bundit Pungnirund</i>	p.31 (2.15-2.30 p.m.)
<b>7. Development of Particleboard from Eucalyptus Bark to Use as Decorative Materials</b> <i>Pakawat Kerprasit, Pramot Weeranukul, Itthi Weeranukul, Kittipong Suweero</i>	p.31 (2.30-2.45 p.m.)
<b>8. The Art of Prediction which is Relevant to The Law of Karma in Theravada Buddhism</b> <i>Dr.Krittikavalai Hirunsi, Associate professor Dr. Praphan Supasorn</i>	p.32 (2.45-3.00 p.m.)
<b>9. Prediction Model of ORAC Value in Mangosteen Pericarp Extract</b> <i>Duanrung Benjamas, Jaturapatr Varith, Chalinda Ariyadet, Pusanisa Thechatakerng</i>	p.32 (3.00-3.15 p.m.)
<b>10. Digital Platforms vs English Proficiency Development</b> <i>Parichart Preechakorn, Sombat Teekasap, Pong Horadal , Nukul Sarawong , Kanakorn Sawangcharoen, Sirigarn Phokheaw</i>	p.33 (3.15-3.30 p.m.)
<b>11. Development of Student’s Behavior with PDCA Cycle Process on Smartphone Assessment</b> <i>Jittawisut Wimuttipanya, Areewan Iamsa-ard, Kanakorn Sawangcharoen, Akaranun Asavarutpokin, Prapai Sridama, Patchara Dethome, Niran Sutheeniran, Teerapat Jansorn</i>	p.33 (3.30-3.45 p.m.)
<b>12. Prediction Model of ORAC Value in Mangosteen Pericarp Extract</b> <i>Duanrung Benjamas, Jaturapatr Varith, Chalinda Ariyadet, Pusanisa Thechatakerng</i>	p.34 (3.45-4.00 p.m.)
<b>13. New Normal Learn Simulation Using a State Transition Model</b> <i>Sineepknan Charoonsaratul</i>	p.34 (4.00-4.15 p.m.)
<b>14. A Study Case of System Analysis and Design for Development of Sterile Medical Device Management Information System with RFID and Supply Chain Concept for Hospital CSSD</b> <i>Kasem Kamolchaipisit, Kampanat Kusirirat, Pannada Jaiboonlue, Tiantada Hiranyachattada</i>	p.35 (4.15-4.30 p.m.)

## Quick Glance of Oral Presentations (Cont.)

International Oral Session (Inside presentation)	
Venue: The meeting room, Building 6, Floor 13, Time: 1:00 p.m. – 5.15 p.m.	
<b>15. The Development and Evaluation of 2D Animation “Amazing Thai Alphabet”</b> <i>Ekaraj Worasamutprakarn, Prawpan Suntornlamai</i>	p.35 <b>(4.30-4.45 p.m.)</b>
<b>16. Adverse Childhood Experiences and Alcohol Consumption Among Vocational Students in Bangkok, Thailand</b> <i>Pisitkorn Phosri, Bang-on Thepthien, Prapapun Chucharoen, Isareethika Jayasvasit</i>	p.36 <b>(4.45-5.00 p.m.)</b>
<b>17. Teacher in Digital Era for Local Development Based on Self-Sufficiency</b> <i>Jittawisut Wimuttipanya, Areewan Iamsa-ard, Kanakorn Sawangcharoen, Akaranun Asavarutpokin, Prapai Sridama, Patchara Dethome, Niran Sutheniran, Teerapat Jansom</i>	p.54 <b>(5.00-5.15 p.m.)</b>
International Oral Session (Online presentation)	
<b>1. Key Factors Influencing Customers’ Purchase Intention of Residential Condominium in Bangkok</b> <i>Qin Ning</i>	p.36
<b>2. The Impact of Work Environment on Job Satisfaction and Employee Performance: a Case Study of a Medical Center in Nigeria</b> <i>Desmond Emmanuel, Sasithorn Suwadee, Chairat Suriyapa, Felicito Jabutay</i>	p.37
<b>3. A Density Functional Investigation of the Push-Pull Effect in Some Poly-2,7',1',6''-[3]calicenes: Towards Novel Molecular Wires</b> <i>Thawalrat Ratanadachanakin, Willard E. Collier</i>	p.37
<b>4. Challenges on the Implementation of Inclusive Education and their Relationship with the Pupils’ Reading and Numeracy Skills</b> <i>Maria Cristina L. Llanes, MAED</i>	p.38
<b>5. Crime Analysis with Crime Mapping in Lipa City: Basis for Crime Prevention Program</b> <i>Edna C. Sanchez Phd Crim</i>	p.38
<b>6. Competency Needs Analysis in Research among Employees of Lipa City Colleges: Basis for Professional Development Program</b> <i>April D. Acielo, MPA</i>	p.39
<b>7. Socio-Emotional Competencies of the Freshmen Students of Lipa City Colleges: Basis for the Proposed Socio-Emotional Development Integrated Curriculum</b> <i>Kenneth Lloyd M. Camaclang, MAPsy, Maica C. Lanuza, LPT</i>	p.39
<b>8. Depression and Its Implications Among People Living with HIV Attending a Treatment Center in Nepal</b> <i>Sangita K.C, Bang-on Thepthien, Seo Ah Hong, Sariyamon Tiraphat</i>	p.40
<b>9. The Usefulness of Methylation-specific Multiplex Ligation-dependent Probe Amplification for diagnosis of Prader-Willi Syndrome in Thai Patients</b> <i>Chanita Prapasrat, Preyaporn Onsod, Veerawat Kortkiatsakul, Duangrurdee Wattanasirichaigoon, Budsaba Rerkamnuaychoke, Takol Chareonsirisuthigul</i>	p.40

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<b>International Oral Session (Online presentation)</b>	
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<b>11. An Analysis of Gendered perceptions towards English Swearing</b> <i>Pattaraporn Sutthirat</i>	p.41
<b>12. The Influence of Classroom Interaction on Students' Innovation</b> <i>Jia Liang</i>	p.42
<b>13. Using Problem-Based Learning Strategy to Enhance EFL Students' Speaking Fluency</b> <i>Anutsara Choochana, Asst.Prof.Dr.Phnita Kulsirisawad</i>	p.42
<b>14. Extraction and Evaluation of Anti-inflammatory Effect of Aloe Gel Extract</b> <i>Suphitchaya Thanittheeraphan, Kongaphisith Tongpoolsomjit, Jarupa Viyoch</i>	p.42
<b>15. Education reform of the People's Republic of China</b> <i>Hua Liao</i>	p.43
<b>16. Implementation of Thesis Citation System of Lipa City Colleges</b> <i>Marebel U. De la Cruz, RL, PhD, Marianne P. Diesta, RL, MLIS</i>	p.43
<b>17. A Teaching Model Based on the Theory of Knowledge Construction</b> <i>Quan Zhang</i>	p.44
<b>18. How to Improve the Teaching Syllabus and Teaching Development of Zhengzhou Vocational College of Tourism</b> <i>Quan Zhang</i>	p.44
<b>19. Study of Conditions and Problems of School Management of University</b> <i>Liping Wang</i>	p.45
<b>20. The Development of Students' Creativity and Innovation Ability Training Program of Medical School</b> <i>Xiangfeng Zhang</i>	p.45
<b>21. A Study on Pro-social Behavior in Role Game Curriculum in Kindergarten</b> <i>Hailing Chen</i>	p.45
<b>22. Procedural Knowledge and Learning Task in Vocational Education Curriculum and Teaching Theory</b> <i>Guo Xing</i>	p.46
<b>23. Research on the Entrepreneurial Path of College Students in the Era of We Media</b> <i>Wu Chengyu</i>	p.46
<b>24. Measuring Dust System in the Air PM2.5 on Smartphone Devices</b> <i>Dr.Petz Veit, Wanwisa Kanchanaporn, Ronnakit Impreecha</i>	p.47
<b>25. Box Transport Mechanism</b> <i>Dr.Petz Veit, Surapong Ramanchit, Saowanee Ampharat, Kumlada Nathongkam</i>	p.47
<b>26. Laser Plate Washing Machine</b> <i>Dr.Petz Veit, Surapong Ramanchit, Piyawath Rueankruea</i>	p.47

## Quick Glance of Oral Presentations (Cont.)

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<b>27. Study of Conditions and Problems of School Management of High School</b> <i>Qingqing Yang</i>	p.48
<b>28. Changing to Use Electric Bicycles Instead of Cars in Bangkok</b> <i>Asst.Prof.Dr.Mafijul Isam, Asst.Prof.Dr.Prapai Sridama, Eakarot Youngpirom, Chuntawat Inprasert</i>	p.48
<b>29. Design and Implementation of a Sun Tracker with a Dual-Axis Single Motor for an Optical Sensor-Based Photovoltaic System</b> <i>Dr.Petz Veit, Surapong Ramanchit, Kreethapol Leethongsuk</i>	p.48
<b>30. Advanced Solar Energy Systems with Thermoelectric Generators</b> <i>Dr.Petz Veit, Surapong Ramanchit, Nattanan Chuayrodsi, Kampanart yunjarer</i>	p.49
<b>31. Development of Modified Tesla Turbine</b> <i>Dr.Amirhossein Taghipour, Akaranan Asavarajphokin, Chatchanop saksatiravitoon, Piyada chomkaew</i>	p.49
<b>32. The Study of the Cooling Performance of the Evaporative Cooling System in Combination with Thermoelectric</b> <i>Asst.Prof.Dr.Mafijul Isam, Wanwisa Kanchanaporn, Napon Kittipakul, Phonrob Boonkasem</i>	p.50
<b>33. Machine Solar Panel Automated Cleaning Environment</b> <i>Dr.Petz Veit, Surapong Ramanchit, Chawanakorn Sumruamru, Chinnachat Miansuan</i>	p.50
<b>34. Lamp Control RGB LED On the Growth and Development of Green Oak Plants</b> <i>Dr.Amirhossein Taghipour, Akaranan Asavarajphokin, Aphisak raksa, Warin Nachanang</i>	p.50
<b>35. Development of a Betel Sort and Betel Cutter Semi-automatic</b> <i>Dr.Petz Veit, Asst.Prof.Dr.Prapai Sridama, Dr.Piyanan Issaravit, Jutamas Srathongkae, Preechakorn Yomma</i>	p.51
<b>36. Study on the Cultivation of Hydroponic Plants Using Artificial LED Lamps</b> <i>Dr.Amirhossein Tghipour, Teerapat Chansorn, Akaranan Asvarajphokin, Pattanapon Ninparkobkool, Anuwat Wongwilai</i>	p.51
<b>37. Aquaponic Water Circulation System In The Aquarium</b> <i>Dr.Amirhossein Tghipour, Akaranan Asavarajphokin, Surapong Ramanchit, Siripong Hunkul, Kritsana Pairoe</i>	p.51
<b>38. Smart Home by a System to Automatically Turn on-off Home Appliances by Testing the Parts of Data Transmission with The Mobile Phone and the Control Board</b> <i>Asst.Prof.Dr.Mafijul Isam, Asst.Prof.Dr.Prapai Sridama, Teerapat Chansorn, Narongrit Meeweaw, Pisit Buangam, Teerapat Jansorn, Soawanee Ruangchaisri</i>	p.52
<b>39. The Education an Automatic Lighting Control in the Classroom</b> <i>Asst.Prof.Dr.Mafijul Isam, Dr.Prapai Sridama, Naphaphorn Jiaphong, Jirapa Pongjaturus, Ratchanon Gonkeaw</i>	p.52
<b>40. Fuzzy Logic-based Maximum Power Point Tracking for a Solar Electric Vehicle</b> <i>Asst.Prof.Dr.Mafijul Isam, Dr.Prapai Sridama, Naphaphorn Jiaphong, Pakanan Wareesri, Suawanee Ruangchaisri</i>	p.53

## Quick Glance of Oral Presentations (Cont.)

International Oral Session (Online presentation)	
<b>41. Energy Analysis and Building Frame by Program BEC-Web Based</b> <i>Dr.Amirhossein Tghipour, Wanwisa Kanchanaporn, Surapong Ramanchit, Thitirat Jankat, Areerat Kobthanyakit</i>	p.53
<b>42. Charging bag By Using Solar Energy and Hydro Energy</b> <i>Dr.Amirhossein Taghipour, Wanwisa Kanchanaporn, Surapong Ramanchit, Pathipan Phiromtan, Wutthipong Chiharit</i>	p.54
<b>43. Prototype Design of a Compact Plug-in Solar Electric Vehicle</b> <i>Asst.Prof.Dr.Mafijul Isam, Asst.Prof.Dr.Prapai Sridama, Dr,Piyanan Issaravit, Khwanamporn Kumthinkea, Rungnpha Mingkeaw, Suawanee Ruangchaisri</i>	p.54

## Quick Glance of Poster Presentations

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2. The Satisfaction Study of Digital Exhibition of Thonburi Art <i>Thongchue Khiatthong, Chakrit Ketruangroch, Samutcha Apisitsuksonti</i>	p.87
3. Facebook Usage Behavior for Learning Animation of Animation and Digital Media Undergraduate Students, Bansomdejchaopraya Rajabhat University <i>Tiantada Hiranyachattada, Kasem Kamolchaipisit, Kampanat Kusirirat, Sirirat Nilsri</i>	p.88
4. Structural Equation Model Development : Human Resource Management and Commitment of Hotels in East Coast Southern Sub Region <i>Pitchayut Penmas, Nuttigan Somnuk, Panjaporn Kuenui, Banja Thongpun</i>	p.89
6. Effect of Panang Curry Recipe Modification on Nutritional Values, Sensory Acceptability and Purchasing Decision <i>Pattamaporn Jaroennon, Sakunta Manakla, Jutawan Nuanchankong, Sujarinee Sangwanna, Charinan Jaengklang</i>	p.89
7. Anti-Periodontal Pathogen <i>Porphyromonas gingivalis</i> and Antioxidant Activities of Thai Medicinal Plant Extracts <i>Suree Nanasombat</i>	p.89
9. Community Business Management on Self-sufficiency Economy in Kiriwong District Nakhon Si Thammarat Province <i>Pitchayut Penmas, Piangpis Sriprasert, Utumporn Sriyom, Pinsorn Buangam</i>	p.90
10. The Development of Clear Salad Dressing from Fruit and Vegetables and Its Sensory Evaluation <i>Sujarinee Sangwanna, Sakunta manakla, Jutawan Nounjankong, Pattamaporn Jaroennon</i>	p.90
11. The Use of Coherence Devices in Academic Writing: A Case Study of Non-English Major University Students <i>Sutharat Puangsing, Pimpaporn Dechvijankit</i>	p.91
12. <i>In Vitro</i> and <i>in Silico</i> Anti-inflammatory Activity of Phenolic Compounds Isolated from <i>Dillenia indica</i> L <i>Thongchai Khammee, Jaroenporn Chokboribal</i>	p.91
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## **Antecedents of Customers Purchase Intention of Residential Condominium: a Case Study of a Property Developer in Bangkok, Thailand**

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**Abstract:** The study focuses on factors influencing customers' purchase intention of residential condominium in Bangkok. Because of the popularity of condominiums in Thailand, the expansion of investment in this sector has continuously increased year and the condominium market has become very competitive. Customers have different reasons to purchase condominium with different decision making to purchase. The main variable is the purchasing of the customers' intention in residential condominium in Bangkok, and antecedents which include property age, property size, metropolitan area, neighborhood, price, and developer reputation. Therefore, the objective of this study is to explore the effect of asset characteristics and developer reputation on purchase intention. This study extended Fishbein model and attribution theory to explain customer purchase intention of condominium and its antecedents. This study includes 282 respondents who plan to purchase or have already purchased condo in Bangkok. The linear regression result show that asset characteristics and developer reputation have positive effect on purchase intension.

**Keywords:** Purchase intention, Developer reputation, Asset characteristics, Condominium evaluation

## **Using Game Based Learning Platform “KAHOOT” to Motivate Students’ Reading Comprehension**

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**Abstract:** Kahoot is a teaching method that allows students to learn while they are playing a game. Kahoot incorporates social media and it enables students to create, share and exchange content with friends in their groups in the classroom. The objective of this research is to study the students' opinions on using the game based learning platform “Kahoot” in the classroom and to gauge the students' levels of satisfaction towards using the activities of this game. The sample group was 54 undergraduate students who had enrolled to study in the course of “English Reading” in the first semester of the academic year 2020 at Kasetsart University, Kamphaeng Saen Campus. The instruments used in this research were a lesson plan with Kahoot, Kahoot's quiz, a computer with an internet connection, smartphones and tablets. A questionnaire was used to ask students' opinions on using Kahoot. to develop students' reading comprehension. The statistical methods used in data analysis were percentage and mean values and standard deviation. The students revealed that the activities on the game based learning platform “Kahoot” provided a new teaching method in reading which helped in creating a learning experience. It allowed students to participate in learning more than through lecturing and they enjoyed playing “Kahoot”. They considered it was fun, enjoyable, useful in gaining knowledge and easy to remember the content. Kahoot captured students' focus and motivated students to be engaged and encouraged interaction in the classroom. It also minimized distractions and improved the quality of teaching and learning in a classroom.

**Keywords:** Game based learning platform “Kahoot”, Social media, Interaction, Reading

## The Impact of Work Environment on Job Satisfaction and Employee Performance: a Case Study of a Medical Center in Nigeria

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**Abstract:** In the modern era, organizations are facing several challenges due to the dynamic nature of the environment. One of the many challenges for a business is to satisfy its employees in order to cope up with the ever changing and evolving environment and to achieve success and remain in competition. In order to increase employee performance, effectiveness, productivity and job satisfaction of employees, the organization must satisfy the needs of its employees by providing good working conditions. This study has extended Herzberg two-factor theory focusing on work environment. The objective of this paper is to analyze the impact of work environment on job satisfaction and employee performance. The study employed a quantitative methodology. Data was collected through a self-administered survey questionnaire. The questionnaire is adopted from a previous validated survey. The study population is 362 which are staff from nine departments in a selected medical center in Owerri, Imo state, Nigeria. Yamane sample size method was employed to sample out 190 respondents from the total population. The study concludes that work environment has positive impact on job satisfaction and employee performance. Job satisfaction also has positively impacted on employee performance. Hence, it is essential for an organization to motivate her employees to work hard using Conducive work environment for achieving the organizational goals and objectives

**Keywords:** Work environment, Employee satisfaction, Employee performance, Task performance, Contextual performance

## A Density Functional Investigation of the Push-Pull Effect in Some Poly-2,7',1',6''-[3]calicenes: Towards Novel Molecular Wires

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**Abstract:** We have been investigating polycalicenes because of their non-benzenoid aromatic nature and the diverse macromolecular structures that result from changing the bonding motif. The poly-2,7',1',6''-[N]calicene family, where N equals the number of calicene monomers, are especially interesting as they are linear and their electronic properties are easily tunable (one of the Grand Challenges of Material Science). These molecules are potential molecular wires and might have applications in sensors and organic solar cells. We studied the push-pull effect on the electronic properties of nine derivatives of poly-2,7',1',6''-[3]calicene 1. The electron donor (push) on the terminal three-membered ring was NH<sub>2</sub> and the electron acceptors (pull) on the terminal five-membered ring were BH<sub>2</sub>, C≡N, NO<sub>2</sub>, and F. All geometries, vibrational frequencies, and properties (dipoles, NMR, etc.) of molecules 1-10 are reported at the B3LYP/6-31+G(d,p) level of theory. Schleyer's nucleus independent chemical shift (NICS) criteria was used to evaluate the aromaticity of each molecule, a critical contributor to electronic properties. Calicene, benzene, cyclopentadienyl anion, and cyclopropenyl cation are reported as references. The Gaussian 16 suite of quantum mechanical programs was used for all calculations.

**Keywords:** Calicene, Polycalicene, Aromaticity, NICS, Push-Pull effect