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Edited by Prof. Eugene P. Sheehan

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MESSAGE FROM THE HOSTING PARTNER ICEDU 2018



The University of Northern Colorado (UNC) is a proud hosting partner of the Fourth International Conference on Education to be held in Bangkok in April of 2018. This is our third time to collaborate with the International Institute on Knowledge Management to organize this important conference. The University is excited to be a part of a conference that allows scholars and practitioners in education from around the world, and especially South East Asia, to present their research and their practical ideas in order to enhance education.

We have a long tradition in education, having been founded in 1889 as a State Normal School to prepare elementary school teachers. Since then UNC has grown to become a comprehensive university of about 13,200 students that offers over 100 undergraduates programs and a wide range of graduate programs, especially in education. UNC prepares the largest number and broadest array of teachers in the Rocky Mountain Region of the United States. Our graduate programs, offered on campus and online, prepare educators for virtually every job in a school including superintendent, principal, teacher leader, teacher, educational coach, school psychologist, nurse, nutritionist, audiologist, and educators working with students with special needs, including the visually and hearing impaired.

UNC's education programs have earned a range of prestigious awards including the Christa McAuliffe Award for Excellence in Teacher Preparation. Some of our programs have been nationally ranked by US News and World Reports. Our faculty members publish in high quality journals and are regularly the recipients of large grants, such as a recent \$2.2Million grant to collaborate with rural school districts in Colorado, USA.

This International Conference on Education fits with the mission of UNC to improve scholarship and educational practice worldwide. We believe that researchers and practitioners, coming together at conferences such as this one, can advance the quality of education received by students worldwide.

More information about UNC and our programs can be obtained from our website (www.unco.edu) or by talking to Eugene Sheehan (eugene.sheehan@unco.edu), Dean of the College of Education and Behavioral Sciences and Conference Chair, or Teresa McDevitt (Teresa.mcdevitt@gmail.com), conference keynote speaker and emeritus professor.

MESSAGE FROM THE CONFERENCE CHAIR ICEDU 2018



College of Education and Behavioral Sciences

Office of the Dean

Hello and welcome to Bangkok, Thailand, and to the Fourth International Conference on Education.

It is my great pleasure to serve as conference chair for the third time for the International Conference on Education, organized by the International Institute of Knowledge Management (TIKM). The University of Northern Colorado (www.unco.edu), my home institution, is proud to be a hosting partner. I attended the first conference in Beijing and was chair for the last two conferences in Bangkok and Kuala Lumpur. Both conferences were lively events where education researchers and practitioners from around the world came together to discuss a wide array of important issues in education.

This year promises to be equally stimulating. The theme around *Sharing Knowledge, Building Dreams* is purposely broad so that we could have an eclectic array of papers ranging over a variety of themes including such topics as innovative educational practices, learning sciences, curriculum that works, and more. We will have about 150 papers from about 25 countries. So we are truly international.

I want to thank TIKM for organizing the conference and for attending to all the logistical details including the hotel, meals, program, and all aspects of conference planning.

I hope during your time at the conference that you take the opportunity to engage with your peers to discuss your ideas for research and practice and that you ask questions of the presenters. There will be plenty of opportunities for collaboration. We will all benefit from our combined participation at this Fourth International Conference on Education.

I also hope you spend some time exploring Bangkok, one of my favourite cities.

Conference Chair ICEDU 2018,

Eugene P. Sheehan,

Dean, College of Education and Behavioural Sciences,

University of Northern Colorado,

USA.

	Table of Contents	Page No
01	THE CAREER ADAPT-ABILITIES SCALE-INDONESIAN FORM: PSYCHOMETRIC PROPERTIES AND CONSTRUCT VALIDITY <i>Wiwik Sulistiani, Dewi Retno Suminar, Wiwin Hendriani</i>	1-9
02	ACCEPTANCE OF INCLUSION AMONG REGULAR EDUCATION TEACHERS IN THE PHILIPPINES <i>Maria Corazon C. Colendrino</i>	10-15
03	PREFERRED COMMUNICATION CHANNELS AMONG OMANI STUDENTS FOR ACADEMIC ADVISING <i>Bilal Khlaf Al.Omari, Anwar Mohamed Saqr</i>	16-24
04	PARTICIPATORY APPROACH IN THE DESIGN OF CREATIVE COMMUNITY SPACES IN SURABAYA <i>Diana Thamrin, Laksmi K. Wardani, Ronald H.I. Sitindjak, Listia Natadajaja</i>	25-33
05	DESIGNING AN INTERNSHIP PROGRAM OF AUTHENTIC ENTREPRENEURIAL LEARNING EXPERIENCE FOR STUDENTS IN ENTREPRENEURSHIP CLASS <i>Inaya Sari Melati, Nina Oktarina, Wisudani Rahmaningtyas, Hana Netti Purasani</i>	34-45
06	ASSESSMENT OF ICT USAGE AMONG SECONDARY SCHOOL COMPUTER TEACHERS AND STUDENTS IN NSUKKA EDUCATION ZONE OF ENUGU STATE, NIGERIA <i>Ugochi Ugwu, Samuel Okeke</i>	46-53
07	STUDENT’S MEDIA LITERACY SKILL’S IMPROVEMENT USING CHARACTER EDUCATION BASED MEDIA LEARNING MODEL <i>Dyah Lyesmaya, Iis Nurasih, Tatat Hartati, Isah Cahyani, Rahman</i>	54-60
08	CAREER DECISION AND K TO 12 CURRICULUM EXITS OF SENIOR HIGH SCHOOL STUDENTS <i>Maurice Dence B. Bacaling</i>	61-67

09	AN ACTION RESEARCH: ENHANCING LEARNING IN UNDERGRADUATE INTRODUCTORY PHYSICS COURSES USING PHOTOVOICE	68-75
	<i>Jacqueline Cuansing</i>	
10	IMPROVING THE QUALITY OF LEARNING ENVIRONMENT THROUGH PROCESS ORIENTED GUIDED INQUIRY LEARNING (POGIL) ENRICHED BY SOCIOSCIENTIFIC ISSUES (SSI) ON CHEMISTRY SOLUTION	76-86
	<i>Sri Rahayu, Fitri Aldresti and Fauziatul Fajaroh</i>	
11	THE USE OF LINEAR ALGEBRA AND ALGEBRA STRUCTURE TEACHING MATERIALS BASED CONCEPT MAPS TO OVERCOME STUDENTS' DIFFICULTIES IN MATHEMATICAL PROOF	87-95
	<i>Rahayu Kariadinata, R.Poppy Yaniawati and Ida Nuraida</i>	
12	THE ABILITY OF (LINGUISTIC AND MATHEMATICAL) MULTIPLE INTELLIGENCE IN PREDICTING THE ACHIEVEMENT OF HIGHER PRIMARY STAGE STUDENTS IN JORDAN IN THE COURSES OF ARABIC AND MATH	96-104
	<i>Odeh S. Murad</i>	
13	PROFESSIONAL COMPETENCES OF MUSIC TEACHER: ATTITUDE OF STUDENTS	105-114
	<i>Jolanta Abramauskiene</i>	
14	INQUIRY-BASED LEARNING EMBEDDED IN 5E LEARNING STRATEGY TO INVESTIGATE LEARNING PROGRESSION OF GRADE 9 STUDENTS FOR FORCE AND EFFECTS OF RESULTANT FORCES ACTING ON OBJECTS CONCEPTS	115-120
	<i>Prissana Rakbamrung and Kanokwan Thongked</i>	
15	EFL UNDERGRADUATE LEARNERS' READINESS TOWARDS MOBILE LEARNING	121-128
	<i>Zeynab Moosavi, Dorothy DeWitt and Zahra Naimie</i>	
16	ENHANCING CREATIVITY THROUGH BATIK TRAINING AS AN ATTEMPT TO PRESERVE CULTURAL AWARENESS IN PRIMARY SCHOOLS	129-141
	<i>Laksmi Kusuma Wardani, Sriti Mayang Sari and Aniendya Christianna</i>	

- 17 UNDERSTANDING THE SPIRITUALITY OF TEACHER LEADERS 142-152
IN EDUCATIONAL INSTITUTIONS IN ASIA

Fritzie Ian P. De Vera

- 18 COLLABORATION SKILLS OF 8TH GRADE SECONDARY 153-161
STUDENTS IN SCIENCE LEARNING WITH ENGINEERING
DESIGN ACTIVITY

Fitri Nuraen, Anna Permanasar and Riandi

TECHNICAL PROGRAM

DAY 01 - THURSDAY, 05TH APRIL 2018

INAUGURATION SESSION

Thursday, 05th April 2018 | 08.45 to 09.55 | Main Hall

07.30 – 08.45	Conference Registration
08.45 – 08.55	Welcome Address by the Conference Convener Mr. Isanka P. Gamage (<i>Co-Founder & Managing Director - The International Institute of Knowledge Management (TIKM), Sri Lanka</i>)
08.55 – 09.35	Speech by the Conference Chair Prof. Eugene P. Sheehan (<i>Dean, Professor of Psychological Sciences College of Education and Behavioral Sciences, University of Northern Colorado, USA</i>)
09.35 – 09.55	Conference Photograph
09.55 – 10.15	Morning Refreshments

KEYNOTE FORUM

Thursday, 05th April 2018 | 10.20 to 11.50 | Main Hall

10.20 – 11.05	“Human Capital and Innovations in Education” by Dr. Alexander Sidorkin (<i>Dean at California State University, USA</i>)
11.05 – 11.50	Keynote Speech by Associate. Prof. Montree Yamkasikorn (<i>Teacher Professional Development Institute (TPDI), Ministry of Education, Thailand</i>)
11.50 – 12.50	Networking Lunch

TECHNICAL SESSION 01: INNOVATIVE EDUCATIONAL PRACTICES 1

Thursday, 05th April 2018 | 13.00 to 14.40 | Main Hall

Chaired by

13.00 – 13.20	A1	English as a Medium of Instruction in Secondary Schools in Sri Lanka : Challenges Wijayatunga A R (<i>University of Leicester, United Kingdom</i>)
13.20 – 13.40	A2	Transforming Academic Programs in Malaysian Higher Education for Thriving in Fourth Industrial Revolution Nor Hasliza Md Saad ¹ , Rose Alinda Alias ² (<i>¹Universiti Sains, ²Universiti Teknologi Malaysia</i>)

13.40 – 14.00	A3	Innovation and Challenges Rafique A. Memon (<i>University of Sindh Jamshor, Pakistan</i>)
14.00 – 14.20	A4	Teaching Blended Instruction through Blending Williams-George, M. A, Williams-George, M. D (<i>Humphreys University, USA</i>)
14.20 – 14.40	A5	Hospitality Education and Finance Courses: an ‘Inconvenient’ Relationship? Anastasios Zopiatis , Christos S. Savva, Antonis L. Theocharous, Neophytos Lambertides (<i>Cyprus University of Technology, Limassol, Cyprus</i>)
14.50 – 15.10	Evening Refreshments	

TECHNICAL SESSION 02: CURRICULUM THAT WORKS 1

Thursday, 05th April 2018 | 13.00 to 14.50 | Hall 01

Chaired by

13.00 – 13.30		Plenary speech by Prof. Terera M. Mcdevitt, (<i>University of Northern Colorado, United States</i>)
13.30 – 13.50	B1	Improving The Quality of Learning Environment through Process Oriented Guided Inquiry Learning (Pogil) Enriched by Socioscientific Issues (Ssi) on Chemistry Solution Sri Rahayu, Fitri Aldresti, Fauziatul Fajaroh (<i>Universitas Negeri Malang, Indonesia</i>)
13.50 – 14.10	B2	Collaboration Skills of 8th Grade Secondary Students in Science Learning with Engineering Design Activity Fitri Nuraeni ^{1,2} , Anna Permanasari ² & Riandi ² (¹ <i>Indonesia Education University, Science Education School of Post Graduate Studies Indonesia Education University, Indonesia</i>)
14.10 – 14.30	B3	Fostering Research-Based Learning in online Higher Education Valcke, M., Wagemans, L., De Backer, L., Jaramillo-Baquerizo, C., and De Wever, B. (<i>Ghent University, Belgium</i>)
14.30 – 14.50	B4	Career Counseling Based on BIH (Believes, Ideals And Hobbies) for Increasing Career Maturity Richma Hidayati, Indah Lestari, Sucipto (<i>University of Muria Kudus, Indonesia</i>)
14.50 – 15.10	Evening Refreshments	

TECHNICAL SESSION 03: EFFECTIVE TECHNOLOGY IN THE CLASSROOM 1

Thursday, 05th April 2018 | 13.00 to 14.40 | Hall 02

Chaired by

13.00 – 13.20	C1	Engaging Polytechnic Students With Student Generated Videos Low, Audrey (<i>Singapore Polytechnic, Singapore</i>)
13.20 – 13.40	C2	Enhancing Learning in Undergraduate Introductory Physics Course Using Photovoice Cuansing, J.T. (<i>University of the Philippines Los Baños, Philippines</i>)
13.40 – 14.00	C3	Campus Support Model to Enhance Online Instruction Li-Ling Chen (<i>California State University, United States</i>)
14.00 – 14.20	C4	Learning Beekeeping Online: Exploring The Effectiveness of Internet-Based Distance Learning in Basic Beekeeping Training Almary Joyce Paigao, Edmund Centeno (<i>University of the Philippines Los Baños, Philippines</i>)
14.20 – 14.40	C5	Blended Learning in Indonesian Higher Education: Benefits and Challenges Usoh, E.J., Ratu, D.M., Lensun, S.F., Maru, M.G., Preston, G., Fischetti, J. (<i>Universitas Negeri Manado, Indonesia, The University of Newcastle, Australia</i>)
14.50 – 15.10	Evening Refreshments	

TECHNICAL SESSION 04: LEARNING SCIENCE 1

Thursday, 05th April 2018 | 15.10 to 17.20 | Main Hall

Chaired by

15.10 – 15.40		Plenary speech by Dr. Sheikh Tariq Mehmood (<i>Deputy Director, Directorate of Distance Education, International Islamic University Pakistan</i>)
15.40 – 16.00	D1	Model of Science Learning through TPACK Framework Based on Hybrid Learning Widdy H.F Rorimpandey ¹ , Nyoman Degeng ² , Punaji Setyosari ³ , Saida Ulfa ⁴ (¹ <i>Manado State University</i> , ² <i>Malang State University</i>)
16.00 – 16.20	D2	“I’m Too Old to Learn New Technology”: Senior Teachers’ Self Concept In Using ICT in Educational Practices Rizki Israeni Nur, Adelina Asmawi (<i>University of Malaya, Malaysia</i>)
16.20 – 16.40	D3	The Effect of Principal’s Technology Leadership on Teacher’s Technology Integration Thannimalai, R., Raman, A. (<i>Universiti Utara Malaysia, Malaysia</i>)
16.40 – 17.00	D4	Students’ Motivational Beliefs, Values and Goals as Related to Academic Hardiness: Implications to Mathematics Teaching and Learning Santos, E. M. (<i>Bulacan State University, Philippines</i>)

17.00 – 17.20	D5	Representation Microscopic Level Assisted Visualization Technology and Student’s Understanding of Chemistry Concepts Ida Ayu Anom Arsani ¹ , Punaji Setyosari ² , Dedi Kuswandi ² , I Wayan Dasna ² (¹ State Polytechnic of Bali, ² State University of Malang, Indonesia)
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TECHNICAL SESSION 05: Assessment and Reliability

Thursday, 05th April 2018 | 15.10 to 17.20 | Hall 01

Chaired by

15.10 – 15.40		Plenary speech by Dr. Brian Beitzel (Professor Educational Psychology State University of New York College at Oneonta (SUNY Oneonta), United States)
15.40 – 16.00	E1	The Mediating Role of Self-Confidence in Predicting Academic Achievement by Effort for Different Ability Groups K L Chue (Nanyang Technological University, Singapore)
16.00 – 16.20	E2	Data Mining for Student Achievements Li-Ling Chen (California State University, United States of America)
16.20 – 16.40	E3	Validation of English Placement Test of Batangas State University Rhia Panganiban Perez (Batangas State University, Philippines)
16.40 – 17.00	E4	The Career Adapt-Abilities Scale-Indonesian form: Psychometric Properties and Construct Validity Wiwik Sulistiani (Universitas Airlangga, Indonesia)
17.00 – 17.20	E5	STEM and 21st Century Skill Initiatives in the United Arab Emirates Education Sector(s) Anthony Rhodes (Innovation, Zayed University, United Arab Emirates)

TECHNICAL SESSION 06: INNOVATIVE EDUCATIONAL PRACTICES 2

Thursday, 05th April 2018 | 15.10 to 17.10 | Hall 02

Chaired by

15.10 – 15.30	A6	Entrepreneurial Learning Transformations Into Activities Dr. Virginija B (Vytautas Magnus University, Lithuania)
15.30 – 15.50	A7	Innovative Educational Practices: Problem Solving Method for Independent Learning In Mathematics Dr. Sheikh Tariq Mehmood (International Islamic University, Pakistan)
15.50 – 16.10	A8	Integration of Mathematics' E-Learning in Resources-Based Learning R. Poppy Yaniawati ¹ , Bana G. Kartasasmita ¹ , Rahayu Kariadinata ² (¹ Pasundan University, ² UIN Sunan Gunung Djati Bandung, Indonesia)
16.10 – 16.30	A9	Development of Linear Algebra and Algebra Structure Teaching Materials Based Concept Maps Rahayu Kariadinata ¹ , R. Poppy Yaniawati ² , Ida Nuraida ¹ (¹ State Islamic University, ² Pasundan University, Bandung Indonesia)

16.30 – 16.50	A10	Can Think-Pair-Share Reduce Math Anxiety of Junior High School Students? Yosepha Patricia W.L. (<i>Yogyakarta State University, Indonesia</i>)
16.50 – 17.10	A11	The Role of The Key Competencies of Vet Teachers In Enhancing Quality of Didactic Process Genutė Gedvilienė ¹ , Sigita Daukila ² (¹ <i>Vytautas Magnus University,</i> ² <i>Aleksandras Stulginskis University Lithuania</i>)

Thursday, 05th April 2018 | 17.20 to 18.20 | Main Hall

17.20 - 18.20	Student Gathering
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Thursday, 05th April 2018 | 19.00 - 21.30 | Main Hall

19.00 - 21.30	Conference Networking Dinner with cultural Show hosted by TIKM
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DAY 02 - FRIDAY, 06TH APRIL 2018

TECHNICAL SESSION 07: CURRICULUM THAT WORKS 2

Friday, 06th April 2018 | 09.00 to 10.20 | Main Hall

Chaired by

09.00 – 09.20	B5	Developing Learners’ 21st-Century Competencies through Extracurricular Activities with Defined Learning Outcomes Y. K. Hui, L. F. Kwok, Horace H. S. Ip (<i>City University of Hong Kong, Hong Kong</i>)
09.20 – 09.40	B6	Career Decision and K to 12 Curriculum Exits of Senior High School Students Bacaling, Maurice Dence B. (<i>Sta. Cruz National High School – Davao del Sur, Philippines</i>)
09.40 – 10.00	B7	Managing Children’s Depression Behavior to Promote Mental Health Well-Being in the Classroom S.A Mulovhedzi (<i>University of Venda, Republic of South Africa</i>)
10.00 – 10.20	B8	Representation Microscopic Level Assisted Visualization Technology and Student’s Understanding of Chemistry Concepts Ida Ayu Anom Arsani ¹ , Punaji Setyosari ² , Dedi Kuswandi ² , I Wayan Dasna ² (¹ <i>State Polytechnic of Bali,</i> ² <i>State University of Malang, Indonesia</i>)
10.20 – 10.40	Morning Refreshments	

TECHNICAL SESSION 08: INNOVATIVE EDUCATIONAL PRACTICES 3

Friday, 06th April 2018 | 09.00 to 10.20 | Hall 01

Chaired by

09.00 – 09.20	A12	Evaluation of Cooperative Learning. Does It Enhance Learning Among The Gen Z Learners? Teh YY , Moy TY (<i>Sunway College, Malaysia</i>)
09.20 – 09.40	A13	Comparative Studies on Entrepreneurial Orientation and Engagement of University Students in Guangdong, Hong Kong and Macau Yingxin LIU (<i>The University of Hong Kong, China</i>)
09.40 – 10.00	A14	Rural University Education: An Approach to Sustainable Development in South Africa Chinaza Uleanya, Yasmin Rugbeer, Hemduth Rugbeer (<i>University of Zululand, South Africa</i>)
10.00 – 10.20	A15	Graduate Teachers’ Readiness to Follow Online Teacher Training Courses L. R. Gonsalkorala (<i>The Open University of Sri Lanka</i>)
10.20 – 10.40	Morning Refreshments	

TECHNICAL SESSION 09: WORKING WITH DIVERSE POPULATIONS 1

Friday, 06th April 2018 | 09.00 to 10.20 | Hall 02

Chaired by

09.00 – 09.20	G1	Preferred Communication Channels among Omani Students for Academic Advising Bilal Al.Omari , Anwar Saqr (<i>Al Buraimi University College, Oman</i>)
09.20 – 09.40	G2	Educating for Sexual Diversity at University N. Nodin (<i>University of London, United Kingdom</i>)
09.40 – 10.00	G3	Indigenous Education in Siberian Arctic: Technologies and Perspectives Koptseva N.P, Sitnikova A.A (<i>Siberian Federal University, Russia</i>)
10.00 – 10.20	G4	Teaching Social Science Research Methods to Non-Native English Speaking Students of International Relations in Thailand Rachael M. Rudolph (<i>Webster University, Thailand</i>)
10.20 – 10.40	Morning Refreshments	

POSTER SESSION

Friday, 06th April 2018 | 10.40 to 11.00 | Main Hall

Chaired by

10.40 – 11.00	P1	The Differences in the Attitudes of The Students with and Without Learning Disabilities Towards Including Their Peers with Mild Intellectual Disability in Regular Elementary Schools Dr. Mansour Sayyah, Dr. Nadia Tazi (<i>Arabian Gulf University, Bahrain</i>)
	P2	The Influence of Social and Humanitarian Effects of Education in Life Quality of Northern Territory Residents In Krasnoyarsk Region A.A. Lukyanova, G.S. Savolaynen, L.A. Didenko, E.S. Kononova (<i>Krasnoyarsk State Pedagogical University, Russia</i>)
	P3	Enhancing Social and Emotional Education in Vietnam Loredana Addimando ¹ , Davide Antognazza ¹ , Daniela Kappler ¹ , Phan Thu Hien, ² Nguyen Viet Trung ³ (¹ <i>University of Applied Sciences and Arts of Southern</i> , ² <i>University of Education</i> , ³ <i>Youth Development Center, Switzerland</i>)
	P4	The Effectiveness of Electronic Module in Blended Learning to Improve Learning Achievements in Learning Komang Anik Sugiani ¹ , I Nyoman Sudana Degeng ² , Punaji Setyosari ² , Sulton ² (¹ <i>Polytechnic Ganesha Guru</i> , ² <i>State University of Malang, Indonesia</i>)
	P5	Blended Learning for IR4.0 Jowati, J. (<i>National Defence University of Malaysia</i>)
	P6	Measuring Learning Preference Assessment: A Fuzzy Logic Approach Deddy Barnabas Lasfeto ^{1,2} , Punaji Setyosari ² , Ery Tri Djatmika ² , Saida Ulfa ² (¹ <i>State Polytechnic of Kupang</i> , ² <i>State University of Malang, Indonesia</i>)
	P7	Sweet Brine: Innovative Procedure to Convert Hard-Rinded Fruit Wastes to Bonbon Desserts Ma. Gloria Ramos Datinguinoo, Dolores Baes (<i>Batangas State University, Philippines</i>)

12.00 – 13.00	Networking Lunch
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TECHNICAL SESSION 10: INNOVATIVE EDUCATIONAL PRACTICES 4

Friday, 06th April 2018 | 10.40 to 12.00 | Hall 01

Chaired by

10.40 – 11.00	A16	Participatory Approach In The Design Of Creative Community Spaces In Surabaya Thamrin, D., Wardani, L.K., Sitindjak, R.H.I., Natadjaja, L. (<i>Petra Christian University, Indonesia</i>)
11.00 – 11.20	A17	The Application of Life Skills Capabilities on Manufacturer of Making of Alum from Canned Waste Beta Wulan Febriana (<i>Islamic University of Indonesia, Indonesia</i>)

11.20 – 11.40	A18	Intercultural Teaching Experiences of A Selected Group of Filipino Pre-Service Teachers In an Overseas Practicum Immersion Dr. Florante D. Garcia (<i>Adamson University, Philippines</i>)
11.40 – 12.00	A19	Educational Attainment, Teaching Experience, Professional Development and Self-Efficacy as Predictors of Chemistry Content Knowledge: Implication for the Development of a National Promotion Examination Guidote, Armando Jr. ¹ Nicdao, Rhodora F. ¹ ,Galiza, Jina Denise R. ² (¹ <i>Ateneo de Manila University</i> , ² <i>Philippine Women’s University, Philippines</i>)

12.00 – 13.00	Networking Lunch	
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TECHNICAL SESSION 11: WORKING WITH DIVERSE POPULATIONS 2

Friday, 06th April 2018 | 10.40 to 12.00 | Hall 02

Chaired by

10.40 – 11.00	G5	Innovation & Indian Thinking Deshpande Hrridaysh (<i>Ajeenkya DY Patil University, India</i>)
11.00 – 11.20	G6	Design Guidelines for the use of indigenous knowledge in interactive exhibits linked to the school curriculum Potgieter, A. ¹ , Schellens, T. ¹ , Valcke M. ² (¹ <i>University of Limpopo, South Africa</i> , ² <i>University of Ghent, Belgium</i>)
11.20 – 11.40	G7	Weekend Recreational Activities of Academic Staff of The Federal University Wukari Gonap E.G., Dante A. B., Ali J.E., Benjamin U. (<i>Federal University Wukari, Nigeria</i>)
11.40 – 12.00	G8	Bruneian Students’ Adjustment Experiences in The UK: An Exploratory Study of Their Adaptation Journey Shanafizahwatty Mat Salleh (<i>Universiti Teknologi Brunei, Brunei</i>)

12.00 – 13.00	Networking Lunch	
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TECHNICAL SESSION 12: INNOVATIVE EDUCATIONAL PRACTICES 5

Friday, 06th April 2018 | 13.00 to 15.20 | Main Hall

Chaired by

13.00 – 13.20	A20	The Effect of Project – Based Learning on Undergraduate Students English for Specific Purposes (ESP) Courses Dr. Aziza Kavlu (<i>Ishik University, Iraq</i>)
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13.20 – 13.40	A21	Synergetic Language Matrix Vladimir Svistelnik (<i>Kornpitacksuksa School, Thailand</i>)
13.40 – 14.00	A22	Story Mapping Strategy for Increasing Reading Comprehension on Student with Intellectual Disabilities Citrawanti Oktavia, Herdina Indrijati (<i>University of Airlangga, Indonesia</i>)
14.00 – 14.20	A23	Effectiveness of Remedial Writing Visual-Motor Integration to Improve Quality of Handwriting in Elementary School Students Yustisiana Hidayati, Herdina Indrijati (<i>University of Airlangga, Indonesia</i>)
14.20 – 14.40	A24	Utilizing Blogs in the Classroom to Improve Writing Skills E.D. Bacon (<i>Rangsit University International College, Thailand</i>)
14.40 – 15.00	A25	The Efficacy Of Teacher’s Written Corrective Feedback (WCF) Towards Students’ Narratives Ronie C. Lagutan (<i>Kaong National High School, Philippines</i>)
15.00 – 15.20	A26	Overstay Teacher Transfers In Sri Lanka: Impact On Management And Teacher Performance In Public Schools Wijayatunga A R (<i>University of Leicester, United Kingdom</i>)

15.20 – 15.40	Evening Refreshments
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TECHNICAL SESSION 13: WORKING WITH DIVERSE POPULATIONS 3

Friday, 06th April 2018 | 13.00 to 15.20 | Hall 01

Chaired by

13.00 – 13.20	G9	Fostering Servant Leadership among Public Elementary School Heads in Batangas Province Lorna Magpantay Asi (<i>Batangas State University, Philippines</i>)
13.20 – 13.40	G10	Good Governance Framework for The Management of the Student Research Program Earvene Jared S. Cunanan and Robelyn P. Cunanan (<i>Batangas State University, Philippines</i>)

13.40 – 14.00	G11	Senior High School Students’ Use of Social Media and Its Perceived Effects on Academic Performance Ma. Laura Nerisa Macabale, Maika Ishigaki, Darren Lester Rareza, Maria Cequeña (<i>Catholic Filipino Academy, Philippines</i>)
14.00 – 14.20	G12	Ethical Perceptions and Intentions among Undergraduate Students in Singapore Chua Wen Xin, Ameen Talib (<i>Singapore University of Social Sciences, Singapore</i>)
14.20 – 14.40	G13	Enhancing Creativity Through Batik Training As An Attempt to Preserve Cultural Awareness in Primary Schools Wardani, L.K., Sari, S.M., Christianna, A. (<i>Petra Christian University, Indonesia</i>)
14.40 – 15.00	G14	Developing Cultural Competence: The Impact of An Immersion Program in Cambodia for Australian Pre-Service Teachers Ms. C. Lembke , Dr. W. Boyd (<i>Southern Cross University Australia</i>)
15.00 – 15.20	G15	Professional Competencies of The Contemporary Music Teacher: Attitude of Students Assoc. prof. dr. Jolanta Abramauskienė (<i>Lithuanian University of Educational Sciences, Lithuania</i>)

15.20 – 15.40	Evening Refreshments
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TECHNICAL SESSION 14: LEARNING SCIENCE 2

Friday, 06th April 2018 | 13.00 to 15.20 | Hall 02

Chaired by

13.00 – 13.20	D6	Self-Efficacy of Malaysian Maritime Education And Training Instructors In Adopting TPACK Model In Teaching Lee Chee Heong ¹ , Cheah Phaik Kin ¹ , Priscilla Moses ² , Er Pek Hoon ² (¹ <i>Universiti Tunku Abdul Rahman (Kampar Campus)</i> , ² <i>Universiti Tunku Abdul Rahman (Sg. Long Campus)</i> , Malaysia)
13.20 – 13.40	D7	Teachers’ Awareness about Novelty, Predictability, and Assessment to Enrich Learning Environment Zaheer, K. (<i>National University of Modern Languages, Pakistan</i>)

13.40 – 14.00	D8	Reflection of Character Values on Curriculum 2013 Implementation in Elementary School: Indonesian Context Eli Meivawati (<i>Yogyakarta State University, Indonesia</i>)
14.00 – 14.20	D9	Enhancing social and emotional education in Vietnam Loredana Addimando ¹ , Davide Antognazza ¹ , Daniela Kappler ¹ , Phan Thu Hien ² , Nguyen Viet Trung ³ (¹ <i>University of Applied Sciences and Arts, Switzerland</i> , ² <i>University of Education</i> , ³ <i>Youth Development Center, Vietnam</i>)
14.20 – 14.40	D10	The Relationship Between Spiritual Intelligence, Locus Of Control And Knowledge Concept Of Ecology With Environmental Altruistic Behavior Muhammad Agus Umar (<i>Bumi Hijrah University, Indonesia</i>)
14.40 – 15.00	D11	How Social And Cognitive Awareness Instruction Can Promote Learning Lin, Che-Li ¹ Tsai, Hsing-Jung ² (¹ <i>National Academy for Educational Research</i> , ² <i>Soochow University, Taiwan</i>)
15.00 – 15.20	D12	Shadow Education System in Bangladesh: A Blessing or A Curse? Mashraky Mustary (<i>Sophia University, Japan</i>)

15.20 – 15.40	Evening Refreshments
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TECHNICAL SESSION 15: INNOVATIVE EDUCATIONAL PRACTICES 6

Friday, 06th April 2018 | 15.40 to 17.30 | Main Hall

Chaired by

15.40 – 16.10	A27	Plenary speech by Dr. Martin Valcke (<i>Head of the Department of Educational Studies, Ghent University, Belgium</i>)
16.10 – 16.30	A28	Implementation of Teacher Teaching in Teaching and Learning in Special Education National School Rajasegara Veloo, Rajendran Subramaniam, Tiong Leh Ling, Alice Pu Ting Kosin, Vitcsy Michael Niob, Yii Meei Yong (<i>Institute of Teacher Education Rajang Campus, Malaysia</i>)
16.30 – 16.50	A29	Understanding The Spirituality of Teacher Leaders in Selected Educational Institutions in Asia De Vera, Fritzie Ian P. (<i>De La Salle University, Philippines</i>)
16.50 – 17.10	A30	Mathematics Teachers' Levels of Ict Expertise And Use, Their Beliefs About Ict Integration and Students' Problem Solving Skills Pastor, MJ D ¹ , Pedro, LA C ² (¹ <i>Ilocos Norte College of Arts and Trades</i> , ² <i>Mariano Marcos State University Philippines</i>)

17.10 - 17.30	A31	Collaborative Peer Teaching and Self-Regulated Learning: The Effect on Students Conceptual Understanding Megawati Rusli ¹ , Nyoman Sudana Degeng ² , Punadji Setyosari ² , Sihkabuden ² (¹ STT SAAT Malang, ² State University of Malang, Indonesia)
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TECHNICAL SESSION 16: WORKING WITH DIVERSE POPULATIONS 4

Friday, 06th April 2018 | 15.40 to 17.20 | Hall 01

Chaired by

15.40 – 16.00	G16	Rethinking Educational Communication As A Domain of Development Communication Rikki Lee Mendiola, Mildred Moscoso, Edmund Centeno (<i>University of the Philippines Los Baños, Philippines</i>)
16.00 – 16.20	G17	Using Books in Addressing The Socio-Emotional Problems of Children with Hearing Impairment De La Cruz, R. V. ¹ Colendrino, M. C. C. ² (¹ Saluysoy Integrated School, ² De La Salle University, Philippines)
16.20 – 16.40	G18	Acceptance of Inclusion among Regular Education Teachers in The Philippines Colendrino, M. C. C. (<i>De La Salle University, Philippines</i>)
16.40 – 17.00	G19	Education Meets Globalization –An Ethnographic Collaborative Study on Global Education Manning, Sophia. M ¹ , Lea Galves ² , Iqbal, I. ³ (¹ Wenzhou-Kean university, China, ² General Maximino Hizon Elementary, Philippines, ³ Government College University Faisalabad, Pakistan)
17.00 - 17.20	G20	Occupational Stress and Subjective Well-Being Among Primary Teachers: The Mediating Role of Job Burnout and The Moderating Role of Salary Meng Du (<i>Beijing Normal University, China</i>)

TECHNICAL SESSION 17: LEARNING SCIENCE 3

Friday, 06th April 2018 | 15.40 to 17.20 | Hall 02

Chaired by

15.40 – 16.00	D13	The Ability of (Linguistic And Mathematical) Multiple Intelligence in Predicting the Achievement of Higher Primary Stage Students in Jordan in the Courses of Arabic and Math Dr. Odeh S. Murad (<i>Ma'an University College, Jordan</i>)
16.00 – 16.20	D14	An Analysis of Monitoring and Evaluation System Launched By Punjab Education Department Hamid Ali Nadeem, Dr. Azhar Mumtaz Saadi (<i>EPPSL Department AIOU Islamabad, Pakistan</i>)
16.20 – 16.40	D15	Principal's Best Practices on Parents and Community Engagement of Schools in Malaysia Nor Aniza Ahmad ¹ , Rodiah Idris ² , Norliza Majid ³ , Anis Farahanim Abd Rahman ¹ , Abd Rahim Mohd Shariff ³ (<i>¹University Putra Malaysia, Selangor, ²Ministry of Education, ³Sultan Idris Education University, Malaysia</i>)
16.40 – 17.00	D16	The Impact of Communication Skills, Leadership, and Critical Thinking In Generic Skills on Achievement Development of Pre-University Students in Malaysia Rodiah Idris ¹ , Nor Aniza Ahmad ² (<i>¹Ministry of Education, ²University Putra Malaysia</i>)
17.00 - 17.20	D17	Relationship Between Social Support and Catharsis Adjustment in Student Athletes Abd Rahim Mohd Shariff ¹ , Norliza Abdul Majid ¹ , Nor Aniza Ahmad ² (<i>¹Sultan Idris Education University, ²University Putra Malaysia, Malaysia</i>)

PUBLICATION WORKSHOP

Friday, 06th April 2018 | 17.30 to 18.30 | Main Hall

Chaired by

17.30 - 18.30	Publication Workshop
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DAY 03 - SATURDAY, 07TH APRIL 2018

TECHNICAL SESSION 18: INNOVATIVE EDUCATIONAL PRACTICES 7

Saturday, 07th April 2018 | 09.00 to 10.20 | Main Hall

Chaired by

09.00 – 09.20	A32	Perspectives of Lecturers and Graduates of International Degree Programmes on the Influential Factors in selecting a Bachelor’s Degree from Private Higher Educational Institutes in Sri Lanka <i>Abeygunawardena K A V (Faculty of Education, University of Colombo, Sri Lanka)</i>
09.20 – 09.40	A33	The Peculiarities of Self-Regulation of Future Music Teachers During The Practice <i>Assoc. Prof. Dr. Rasa Kirliauskiene (Lithuanian University of Educational Sciences, Lithuania)</i>
09.40 – 10.00	A34	Exploration of Physics Problem-Solving Skills With Phenomena-Based Learning in Senior High School Students <i>Lia Yuliati, Parno (Universitas Negeri Malang, Indonesia)</i>
10.00 – 10.20	A35	Enrichment Activities in Mathematics: An E-learning Material for Kindergarten <i>Jericho Kinguingan, Warren Ligmayo, Lannie May Espiritu, Jo Ann Doculan (Ifugao State University, Philippines)</i>
10.20 – 10.40	Morning Refreshments	

TECHNICAL SESSION 19: CURRICULUM THAT WORKS 3

Saturday, 07th April 2018 | 09.00 to 10.20 | Hall 01

Chaired by

09.00 – 09.20	B9	Development of Curriculum for Regional Based Education to Optimize Student Potential of Indonesia <i>Muhammad Risyad Fahlefi (Risyad) (University of Airlangga, Indonesia)</i>
09.20 – 09.40	B10	Analyzing Business Graduates Employability through Soft Skills Development: Graduates and Employers Perspective <i>Sultana, A (Risyad) (American International University-Bangladesh)</i>
09.40 – 10.00	B11	Community Outreach Program: An Effective Approach for Two-Way Learning Process <i>Mariana Wibowo (Petra Christian University, Indonesia)</i>
10.00 – 10.20	B12	Evaluation of The Physical Education and Sports Teacher Undergraduate Program (The Case of Turkey) <i>Aysel Namli and Cenk Temel (Inonu University, Turkey)</i>
10.20 – 10.40	Morning Refreshments	

TECHNICAL SESSION 20: EFFECTIVE TECHNOLOGY IN THE CLASSROOM 02

Saturday, 07th April 2018 | 09.00 to 10.20 | Hall 02

Chaired by

09.00 – 09.20	C6	Internet usage and juvenile delinquency in high school students in Surabaya Indonesia Herdina Indrijati, Endah Mastuti, Prihastuti (<i>Airlangga University</i>)
09.20 – 09.40	C7	Teachers’ Technological Pedagogical Content Knowledge (TPACK) in The K to 12 Mathematics Curriculum: Basis for an ICT Training Program Lumabao, JM B.1, Pedro, LA C. ² (¹ <i>Ilocos Norte College of Arts and Trades</i> , ² <i>Mariano Marcos State University, Philippines</i>)
09.40 – 10.00	C8	The Effectiveness of Infographic on The Kinematics of Rectilinear Motions Concept on Student Results in Senior High School Netty Apriyanti, Mohd Shahril Nizam Shaharom, Suzieleez Syrene Abdul Rahim (<i>University of Malaya, Malaysia</i>)
10.00 – 10.20	C9	Teacher’s Perspectives on the State of Today’s Education and the Mobile Learning BYOD (Bring Your Own Device) Effect on Student Learning in Higher Education Pedro Coelho (<i>Higher Colleges of Technology, United Arab Emirates</i>)
10.20 – 10.40	Morning Refreshments	

TECHNICAL SESSION 21: INNOVATIVE EDUCATIONAL PRACTICES 8

Saturday, 07th April 2018 | 10.40 to 12.40 | Main Hall

Chaired by

10.40 – 11.00	A36	Enhancing Teacher Understanding in Onet Idea Through Thinking Skills Focusing on Science Process Skills For Private School Teachers Pathommapas Nookorn (<i>Udon Thani Rajabhat University, Thailand</i>)
11.00 – 11.20	A37	Conducting Action Research in The Classroom: A Practical Asset in The Development of The Reflective Analytic Teacher Practitioner Williams-George, M. A, Williams-George, M. D (<i>Humphreys University, USA</i>)
11.20 – 11.40	A38	The Impact of Training on Micro-Teaching for Student Teachers In The College of Education At Kuwait University Dr. Jasem Al-Tammar, Dr. Salwa Al-Jassar (<i>College of Education, Kuwait University, Kuwait</i>)
11.40 – 12.00	A39	Building Critical Thinking and Ecology Literacy using Local Potency-based Teaching Materials in High School Students Lysa Ulfa Karina, Siti Sriyati, Amprasto, Diana Rochintaniawati (<i>Universitas Pendidikan Indonesia</i>)
12.00 – 12.20	A40	A User Experience Analysis on E-Learning Environments: Towards A Reflexive Approach in E-Learning Systems Development Rikki Lee B. Mendiola (<i>University of the Philippines Los Baños, Philippines</i>)
12.20 – 12.40	A41	Student’s Media Literacy Skill’s Improvement Using Character Education Based Media Learning Model Dyah Lyesmaya ¹ , Iis Nurashiah ¹ , Tatat Hartati ² , Isah Cahyani ² (¹ <i>Universitas Muhammadiyah Sukabumi</i> , ² <i>Universitas Pendidikan Indonesia, Indonesia</i>)

TECHNICAL SESSION 22: EFFECTIVE TECHNOLOGY IN THE CLASSROOM 3

Saturday, 07th April 2018 | 10.40 to 12.40 | Hall 01

Chaired by

10.40 – 11.00	C10	ICT Challenges to the Teaching – Learning Process: Basis for the Development of Digital Literacy Program Marie Grace L. Apale (<i>University of Perpetual Help System DALTA, Philippines</i>)
11.00 – 11.20	C11	The Animal Kingdom: An ELMBC Jashly James Nipahoy, Myle Melody Daniels, Dhayen Lobhoy, Jo Ann Doculan (<i>Ifugao State University, Philippines</i>)
11.20 – 11.40	C12	Utilization of Environment Learning Media around through Modeling Activities to Increase the Teacher Ability and Ability of Environment Problems around Basic School Students in The Border Region Makrina Tindangen (<i>Mulawarman of University, Indonesia</i>)
11.40 – 12.00	C13	Earth and Space: An ELMSC Cheska Mae Veranga, Alma Cablinan, Anna Leah Cablinan, Jo Ann Doculan (<i>Ifugao State University, Philippines</i>)
12.00 – 12.20	C14	The Factors of Reflective Learning through Web Technology Kattakamon Pislai-Ngam ¹ , Thiyaporn Kantawatana ² , Paitoon Pimdee ² (¹ <i>Valaya Alongkorn Rajabhat University under the Royal Patronage</i> , ² <i>King Mongkut's Institute of Technology Ladkrabang, Thailand</i>)

TECHNICAL SESSION 23: LEARNING SCIENCE 3

Saturday, 07th April 2018 | 10.40 to 12.40 | Hall 02

Chaired by

10.40 – 11.00	D18	Student Profile in Completing Questions Based on Cognitive Level of Bloom's Taxonomy Anderson and Kreathwohl Widinda Normalia Arlianty (<i>Islamic University of Indonesia</i>)
11.00 – 11.20	D19	Designing Classroom Activity: To Understand The Key Psychological Perspectives in an Introductory Course Ms. Rubayat Kabir (<i>East West University, Philippines</i>)
11.20 – 11.40	D20	Improvement of Evaluation of Educational Program by Educational Development in the Border Region through Focus Group Discussion (FGD) Activity Aloysius Hardoko (<i>Mulawarman of University, Indonesia</i>)
11.40 – 12.00	D21	Analysis of Learning Difficulties about “Introduction to Accounting and Finance of Work Sheet Material Learning” M. Rizky, Suratno, Rizali Had (<i>Lambung Mangkurat University, Indonesia</i>)

12.00 – 12.20	D22	Indonesian Academics Work Motivation Linda L (University of Sam Ratulangi Manado Indonesia)
12.20 – 12.40	D23	Test Anxiety, Computer Self Efficacy, and Perceived Ease of Use in Completing Computer-Based Test on First Year Students Endah Mastuti (<i>Universitas Airlangga Indonesia</i>)

CHAIR WORKSHOP

Saturday, 07th April 2018 | 12.40 to 13.10 | Main Hall

Chaired by

12.40 - 13.10	Workshop by Conference chair
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CONFERENCE CLOSURE

Saturday, 07th April 2018 | 13.10 to 13.40 | Main Hall

13.10 - 13.40	Conference Concluding and Awarding Ceremony
13.30 - 13.40	Vote of Thanks By Mr. Oshadee Withanawasm (Co-Founder, CEO & Chairman - The International Institute of Knowledge Management (TIKM), Sri Lanka)
13.40 Onwards	Networking Lunch

Sunday, 8th April 2018 | Post Conference Tour (Optional)

Conference Chair

.....
Prof. Eugene P. Sheehan
(University of Northern Colorado, USA)

Conference Convener

.....
Mr. Isanka P. Gamage
(The International Institute of Knowledge Management, Sri Lanka)

Conference Secretariat

.....
Mr. Saranga Meepitiya

(The International Institute of Knowledge Management, Sri Lanka)

Evaluation Panel

.....

Organized By



Hosting Partner



Academic Partner



Event Partner



Strategic partner



Tour and Accommodation Partner



ENHANCING CREATIVITY THROUGH BATIK TRAINING AS AN ATTEMPT TO PRESERVE CULTURAL AWARENESS IN PRIMARY SCHOOLS

Laksmi Kusuma Wardani^{1*} Sriti Mayang Sari¹ and Aniendya Christianna¹

¹*Faculty of Art and Design, Petra Christian University, Indonesia*

Abstract: Batik is an Indonesian cultural heritage that can enhance one's creativity in order to obtain independent achievements. Batik training is one that is conducted in the field of arts. Specific targets determined for this research are to assist primary students in discovering their talents, developing their skills and creativity in creating motifs that are sourced from the natural environment, implementing them in patterns, and training one's self through batik techniques. To achieve these goals, the research adopts the participatory action research method through training of batik writing and batik colet. Research results reveal that children are able to produce various creative works that are inspired by plants and animals. The increase of the student's creativity has been influenced by factors such as the student's personality, the facilitator as external motivational drivers, creative activity processes, and works as evidence of the children's learning outcomes.

Keywords: Batik training, children creativity, primary school

Introduction

Batik is a piece of wastra or cloth made with traditional technique of blocked dyeing using batik wax to prevent colors from penetrating (Doellah, 2002). The skill of batik has been passed down over generations. Batik is taught in non-formal institutions and some artisans are engaged in home industry for independent economic improvement. Batik contains local wisdom of Indonesian culture that may lead to enhance one's creativity towards an independent achievement. When we explore batik making, we will identify a number of techniques, methods, and cultural values supporting the establishment of character, personality, and disposition of a particular person. The basic idea of this study is that a good character has to be shaped and established since the early age. Therefore, the skill of batik making is a part of creative process that may lead to the improvement of independent attitude and behavior among children. Accordingly, children should have learned how to make batik since they are in primary schools. However, in Surabaya, there is not a single primary school that implement batik making in its academic curriculum. Primary schools should accommodate adequate local content in their curriculum in order to allow children to be familiar with cultural heritage and sustain them through cultural art works and vocational artisanship (Hsu, 2017). One of the objectives of art education is enhancing the creativity among children. Through art training, children will have acquire positive characters that shape their values of appreciation, critical thinking, and creativity through learning methods, media usage, and teachers. Batik training ensures the development of creative character. Students are expected to be responsive to visual forms, sensitive to environmental issues, and skillful in potential self-development. At the same time, students should be skilled at critical evaluation, have perseverant, thorough, and careful task accomplishment, as well as pride to one's self art works. They are expected to possess certain qualifications such as having factual knowledge in doing simple tasks using the specified tools, rules, and processes under the supervision of teachers. They should also be fully responsible for the process and accomplishment of the task.

Batik training is aimed towards cognitive development (knowledge), psychomotoric improvement (productive skill), and affective enhancement (attitude). This training emphasizes the importance of the learning of art and learning through art (Pinta, 2015). Training that is centered on cognitive development, psychomotor

improvement, and affective enhancement will result in creative students. UNESCO (2009) reported that high-quality education has to lead to the achievement of four learning principles. They are 1) learning how to be, 2) learning how to learn, 3) learning how to do, and 4) learning to work together. The implementation of the four principles will ensure the extensive enhancement of students' creativity in the society (Shaheen, 2010). Parents, teachers, and community play important roles in the enhancement of a child's personality. Therefore, both internal and external school environment should provide adequate free space for creative activities.

The objectives of this batik training, using the techniques of painting and brushing (colet), are to identify the children's talents, improve skills, and enhance creativity. The traditional technique of batik painting involves the application of batik wax on a piece of cloth using a pen-like tool called canting. The coloring technique of batik colet is done by applying colors using a paintbrush without dyeing. Therefore, this technique is more simple and easy to learn for primary school students. This activity ensures interaction between students, teachers, and trainers that accordingly, may lead to direct dialogue, suggestion, and transfer of knowledge and skill

Research Method

Formal educational institutions provide appropriate places for the students to learn in order that the students can optimally enhance their talent and creativity in compliance with their personal needs. Education institutions should encourage students to create creative works through creative activities or creative processes. The environment that provides chances and opportunities for the students to perform creative activities and creative processes will lead to the production of creative works (Munandar, 2002).

This study employs participatory action research emphasizing the principle of learning by doing. Students, teachers, headmasters, facilitators, and researchers were engaged in the study. The subjects of the study are grade 6 students of Sekolah Dasar Negeri Simolawang KIP 156 Surabaya and Sekolah Dasar Negeri Sidodadi II Surabaya. Data was collected through observation on the process and outcome. Descriptive analysis was employed in this study to describe the learning processes oriented to the enhancement of cognitive, psychomotor, and affective aspects (action planning) to result in creative works. Students underwent the following four action learning steps:

1. Students explored active traditional batik artisans to enhance students' skill (seeing, listening, and learning from experts), and explored the city park to enhance students' sensitivity to creative personal potentials using the environment as the source of ideas. It is expected that they can document various motifs of flora and fauna (factual data of observation).
2. Students produced designs to improve the students' creativity through batik motif making and composition development.
3. Students joined batik training to improve students' skill through the making of batik works using both painting and brushing technique.
4. Students held work exhibitions to obtain appreciation, criticism, suggestion, and compliment in an attempt to objectively evaluate the success rate of the learning program.

Results and Discussion

Batik training is intended for the transfer of knowledge (scientific knowledge of batik art), creativity enhancement (motif making, composition, and coloring), and skill improvement (technique of batik making). Creativity is a popular term in art and design. It particularly refers to creative activities that result in new ideas

and innovation (Hurlock, 1978). The creative activities of batik training include introduction, knowledge transfer, and direct learning through seeing, touching, and feeling. Eventually, trainees will have to make or create an artwork. Acceptance, participation, and evaluation as parts of affective behavior will have to be enhanced since the early age. Knowledge, comprehension, analysis, application, and evaluation are intended to enhance cognitive aspects. Meanwhile, perception, preparedness, guided movement, accustomed movement, complex movement, movement adjustment, and work speed are intended to improve psychomotor aspects (Wardani, 2002). The creative processes in batik training will be further elaborated in the following discussions.

In the exploration of batik artisans, primary school students were expected to see, observe, know, and learn to know directly from the artisans in the batik home industry in Jetis, Sidoarjo, East Java (figure 1). The artisans shared knowledge about process, materials, tools, and their creative products. The skillful artisans shared their batik skills to the public since they are aware that batik has to be preserved by the new generation. Learning by directly observing artisans' activities and having a dialogue with them enabled the students to acquire knowledge regarding motifs, colors, and techniques. Therefore, students will be motivated to learn further.

The exploration of batik artisans also enabled the students to identify and explain the creative economic potentials and understand various kinds of creative products. Direct observation is needed to stimulate students' curiosity on something new or something that they have not studied at school. Students will give higher appreciation to traditional cultural values and the artisans' perseverance and creativity in the process of batik making. Outdoor learning through direct observation of artisans' activities is both enjoyable and educational. However, the information that the artisans gave to the students were occasionally not optimally recorded by the students.



Figure 1 Students had a field exploration to the workshop of Batik Amri Jaya, Jetis, Sidoarjo, East Java - Indonesia. The students enthusiastically watched and listened to the explanation of traditional batik making process. This exploration is beneficial for the students to be able to appreciate the artisans' profession. In addition, it is also useful for the students in identifying traditional art and culture existing and developing in local societies.

Therefore, teachers had to prepare worksheets to be filled up by students when they have an outdoor learning activity. They are requested to report what they have observed. However, in spite of the possibility of inadequate data recording in students' memory (optimally or less optimally remembered), this initial activity is beneficial and useful as a warming up exercise to enhance the children's creativity (figure 2).



Figure 2 Students made a report in the batik artisans' workshop by filling up the worksheet prepared by the researcher to identify how much they can record the information provided by the artisans.

The students also had another exploration activity in the city park of Surabaya. The objectives of this activity are to provide a learning medium and to explore the natural potentials in the development of batik motifs. Environmental exploration encourages students' creative sensitivity with the environment being the source of idea. The output of the exploration is the documentation of various motifs of flora and fauna. In the activity, each school was divided into small groups with one facilitator. The facilitators were the students of interior design department of Petra Christian University. The researchers ensured that the facilitators and school teachers facilitated the students in observing the trees, leaves, flowers, animals, and other natural objects that can potentially be resources for the development of batik motifs (stimulating the emergence of idea through observation of natural objects) (figure 3). When the students have observed various kinds of plants and animals in the park, the students created their own motif after discussing it with the group and the facilitator. They imitated and drew what they have observed based on their own imagination. The students observed, recorded, and identified the potential and characteristics of the objects. Furthermore, they identified, selected, drew, and created alternative motifs based on observation of nature.



Figure 3 The students made motifs with the environment being their source of idea. They were facilitated by the facilitators and school teachers

Natural environmental exploration is beneficial to identify various kinds of natural potentials. Equally important is that it encouraged the students' ability to identify their personal potentials that they are capable of making particular motifs and realized that they can find various kinds of alternative motifs based on environmental observation. The output of this exploration are various kinds of attractive, unique, and child-like flora and fauna motifs. Although they imitated what they saw directly, they created spontaneous and attractive forms of expressions (figures 4 and 5).

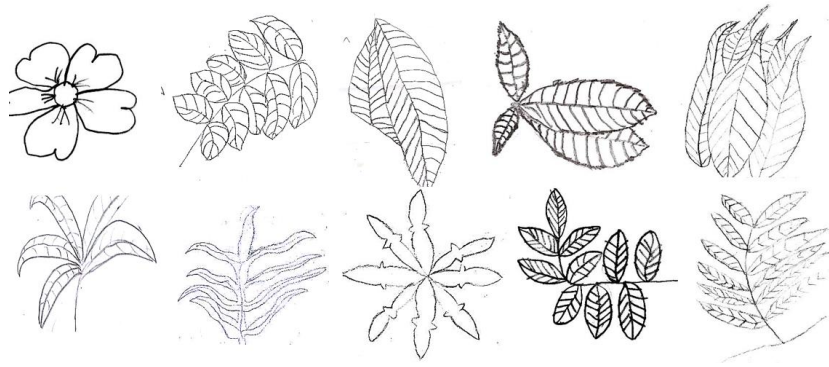


Figure 4 A number of sample leaf motifs created by the students of Sekolah Dasar Sidodadi II and Sekolah Dasar Simolawang KIP 156. Lines and arches are the shapes easily captured by children's visual sense. Therefore, the created expression is a well-arranged leaf. .



Figure 5 A number of sample animal motifs created by the students of Sekolah Dasar Sidodadi II and Sekolah Dasar Simolawang KIP 156. The students captured 3-dimentional shapes by their visual sense. Then they expressed them on a piece of drawing paper. They output was a two-dimensional shape. The shapes were the output of spontaneous expression, which was the specific characteristic of 10-year-old children.

In the design making, the teachers and facilitators assisted the students in identifying the uniqueness of their talents in a simple method. The tools and materials needed were only sample motifs made of paper, cotton cloth, and pencil (figure 6). In this training, two methods were applied. In the first method, the facilitators shared the motif already made by the students. Then they made a model with a piece of thick paper. Therefore, the students just made the composition on a piece of cloth based on the already prepared model. In the second model, the students made a motif with free composition on a piece of cloth. In the second method, the students were expected to have a free imagination and creation in a flexible time just like in the first method already practiced at school. Facilitators facilitated and divided the motif compositions into groups. The results of the activity indicated the students' eagerness in training. They were truly delighted and motivated.



Figure 6 Stages of motif composition making on a piece of cloth using the model already prepared by the students. .

Batik training includes the transfer of knowledge/theory on batik integrated into batik making with simple techniques. The work of batik making starts from the application of wax on a piece of cloth by a pen-like tool called *canting*. The next step is the coloring with the *Colet* technique. The final step is the wax removal or locally known as *nglorod*. At the initial step of batik making, the traditional technique with *canting* was introduced to students. They practiced how to apply wax to the previously prepared motif composition. The tools and materials needed among others are 1) wax for *nglowong*; 2) medium-sized *canting* to make motif outline or *nglowong* and small-sized *canting* for *isen-isen* (filling) or *cecek* (dots), or large-sized *canting* to give emphasis on the lines to be distinguished, 3) wax boiler and stove filled with kerosene, 4) hurdle for hanging the cloth (Ministry of Trade republic of Indonesia, 2008).

Batik is made of textile colored with a particular specific motif and wax-blocked dyeing. The technique of batik making is the process ranging from the textile preparation to the batik completion. The preparation work includes the preparation of the textile including *nggirah/ngetel* (washing), *nganji* (starching), and *ngemplong* (ironing, calendaring). Students of primary school did not need to perform this task. They only needed the knowledge of basic techniques. The process of batik making includes wax application on particular motifs of textile, *celup* (dyeing), *colet*, painting, printing to the removing of wax from the textile (Susanto, 1980). Batik painting with *colet* technique involves the use of *canting* for painting and coloring on the expected motif and dyeing technique to provide basic color for the batik. In this project, the students accomplished these activities together with teachers and facilitators or trainers (figure 7). Teachers and facilitators helped students find the uniqueness of their talent and appreciate them through realizing their drawings in the form of batik motifs. Involvement of teachers in the learning process by practicing would result in the improvement of the students' self-confidence, because student motivation can be impacted by teachers instruction (Lia M. Daniels, Amanda Radil & Amanda K. Wagner, 2016). The art education of requires teachers to construct learning experiences that generate creative products (Charles Gustina and Rebecca Sweet, 2014)



Figure 7 Stages of wax application on the textile with traditional batik painting using a canting. The students learn about perseverance, patience, meticulousness, and carefulness since they use hot wax.

The coloring process using the *colet* technique is an interesting creative process for students. Togetherness with teachers and facilitators can motivate students to learn more. Even the students will be motivated to try further. The coloring process used the remazol paint with the help of a brush (figure 8). Batik colors are obtained in different ways. First, batik can be colored with brush, drying, fixation, and *nglorod* (wax removing) and washing. In the process, the brushed textile is placed in a waterless solution for fixation. After that, the wax was removed from the textile in the boiling water. This process is known as *nglorod*. The textile is then dried in a place away from direct sunlight. The process is more simple and quick, without any process of dyeing as in the process of batik making with indigosol paint. Second, batik can also be colored with fifty grams of remazol paint per one liter of water, or five grams per 100 cc of water. Third, coloring can be obtained by fixation with water glass or sodium silicate of 50% or 30°. Fourth, fixation takes 60 minutes at room temperature (cooling). Fifth, the batik *colet* still uses the batik painting technique through the process of *nglorod* without boiling. Sixth, to have a red color or the substitute color for one piece of textile ten grams of remazol paint (200 cc of paint solution) and 0.25 liters of sodium silicate solution of 50% or 30° Be or water glass would be required. At this stage, the researchers had prepared all materials for this project.



Figure 8 Coloring stage on the composition already made with the *colet* technique using a brush.

The evaluation of activities revealed that remazol paint is safe for children and hence for the primary school children. The process was simple and fast. It could be easily and practically applied like the usual process of batik making. Therefore, the *colet* process with remazol color did not require a new difficult technique. In addition, the color was bright. The real color would soon appear after the students apply the brush on the textile. This condition simplified the process of color composition making. The batik had a bright color and good quality. It was also economic and thus it is affordable to middle-to-lower groups. The application was also practical and simple. Water glass or sodium silicate was used for fixation or washing in order to ensure that the color did not fade. The selected colors for the *colet* process in the training were yellow, wine-red, Turkish blue, green, orange, violet, and pink. Meanwhile, the materials were size one and two oil paint brushes as the *colet* tools, cups to contain paint, foam to color large areas, cotton buds to color little motifs, and water glass for fixation.

After the *colet* process was over, the next process was fixation with water glass. The textile was dried at room temperature for several hours. In real practice, fixation takes minimally 1 hour. In this training, considering the limited time, the fixation took only 15 to 30 minutes before the textile was dried. After the textile dried, it was placed in boiling water (*nglorod*). It was then dried again. The evaluation revealed that the students were very happy and were eager to perform further experiments. The students carried out all the processes perseveringly and orderly. They passed the stages independently under the guidance of facilitators and teachers. The students were very proud of their final output. Teachers and trainers had been engaged in the training and working. They contributed much to the success of the activities. The students enjoyed the process of batik making with teachers and facilitators under the supervision of the headmasters and researchers. The students' works can be used for decoration of interior design elements. The bright color compositions make students' batik decoration distinguished when they are placed on the walls, a representation of the children's cheerful character in the learning process (figure 9).



Figure 9 Fixation stage (the process of fixing the color to prevent from fading away) using water glass, removing the wax with boiling water, washing with cold water, and drying the batik.

The final activity was exhibition and joint work display. The exhibition is the final step in the training. Evaluation of the final works of the students revealed the display of student potentials as such as imagination, creation, and production of good works. This final step was an important moment for the students to show their personal existence and expression in the society. It was also intended to reveal students achievement to the society and to enhance self-confidence and self-awareness in one's potential (figure 10).



Figure 10 Joint exhibition as the final activity of the training to nurture the sense of pride among the students in the society.

The evaluation of the final products of the students revealed that the students generally applied free composition and centered arrangement, since the textile used for the training was in the form of square (figure 11). In general, the students were very happy with free expression. Initially, they were encouraged to use three motif compositions. However, they had their own creation and developed the compositions at their own will.



Figure 11 Students' final products representing the students' final expression in a free creation.

Overall, the evaluation results in batik training revealed positive outcomes of the students' intellectual development as summed up in table 1 refers to the Bloom theory (Kevin Marjoribanks, 1980) and recommended pedagogical approaches (The College Board, 2012).

Table 1. Intellectual Behaviors Enhanced in the Batik Training for Primary School Students

No	Stages of Batik Training		Cognitive	Psychomotoric	Affective
1	Exploration of technique and skill of batik makers.	Visit to batik makers in the surrounding community	Get acquainted and familiar with various kinds of batik technique and the process of batik production.	Students learn to prepare, pay attention, hear, see, record the results demonstrated.	Students orderly pay attention, ask, and appreciate batik makers and creative resources.
2	Exploration of natural resource potentials	Visit to city park, surrounding natural environment.	Know and understand various kinds of motif and natural potential sources in the surrounding environment as the source of idea in the making of batik motifs.	Students learn to search, select, determine, hold, touch and write exploratory findings, and study within groups.	Students are able to identify, choose, orderly discuss options, and report on exploration results.
3	Motif design making	Batik motif making (various creations)	Students are able to find an idea and make various kinds of motif to be chosen in the batik composition making.	Reactions are directed, imitations, create motifs, designing motives with the group.	Students are able to discuss, perform, and complete the making of motifs
4	Design making	Batik motif composition making	Students are able to compose simple motif using the natural composition technique.	Students make a reaction that is directed, make development, and try a new arrangement, designing with the group.	Students are able to show, connect, combine, organize and refine the arrangement of motives.

5	Design Criticism	Reciprocal observation, mutual appreciation and input to students works among students or between trainers or teachers and students	Students are able to criticize the strength and weakness of students works together with the trainers and teachers.	Natural reactions, showing each other a good composition, discussions with teachers, facilitators, and groups.	Students listen to input / accept or reject criticism, able to differentiate, maintain, and improve the results already produced.
6	Design making	Developing the composition previously prepared based on the inputs	Students are able to develop shape composition based on suggestion / inputs / criticism from trainers and teachers.	Students improve, make changes, and work quickly.	Students take the initiative to improve, follow the advice, and make perfect the results of their works.
7	Pattern and composition making	Moving the motif and composition of batik to the textile	Students are able to make batik composition pattern on textile.	Natural reactions, complex reactions, and creativity are developed by the scraping of pencil on the cloth	Students follow instructions, move motives, organize and adjust the media.
8	Wax application	Process of batik painting on textile	Students are able to understand and comprehend the technique of batik painting on textile.	A complex reaction, creativity is developed by the drawing with wax onto a cloth.	Students carry out their work, carefully, diligently and thoroughly practice, and complete them.
9	Coloring	Process of coloring with the technique of Colet using a brush	Students are able to comprehend and understand the basic technique of batik Colet, choosing colors and making composition.	A complex reaction, creativity is developed by painting the color with a brush on a cloth	Students perform, practice, do their work carefully, patiently, diligently and thoroughly until completion
10	Fixation	Process of color fixing with water glass	Students are able to understand tools, materials, techniques, of color resisting techniques in order that the color does not fade away	Directed reactions, complex reactions, adaptation to ways / techniques, tools and materials	Students obey and abide by rules, and adjust to the chemical fluids used as media.
11	<i>Nglorod</i>	Process of removing the wax from the textile in the boiling water	Students are able to understand tools, materials, and techniques of wax removal from textile	Directed reactions, complex reactions, adaptations to methods / techniques, tools, and materials	Students obey and abide by rules, and adjust to the hot chemical fluids used as media
12	Washing and drying Batik cloth	Process of washing the residue of wax from the textile and dry it	Students are able to finish the final step by removing the residue of wax from the textile and dry it.	Directed reactions, complex reactions, adaptations to, ways / techniques, tools, and materials	Students are able to organize, develop tolerance and complete their task.
13	Exhibition of Works	Exhibition of batik already made by students	Students are able to make comparison and show existence.	Installing works, composing and placing works in exhibition displays	Students appreciate each other's work, and take pride in their own work, learn values of praise and appreciation

Conclusion

The process of learning how to be, learning how to learn, learning how to do, and learning to work together can be successful depending on the of students' personal factors such as willingness to study, having a curiosity, willingness to try, and willingness to do. Such conditions had resulted from the engagement and motivation of teachers and facilitators. In addition, mutual observation and reciprocal suggestion contributed much to the success of the work. Students were motivated to achieve further. Through the process of batik training, students practiced and developed skills, and enhanced their creativity in the field of art. It was apparent that students were able to produce various kinds of creative works. From the research, it was found that batik training for primary school students is influenced by four factors. They are personal factor (willingness and motivation to learn), motivator (support, appreciation, and compliment from environment, teachers, parents, and community), process (opportunity provided by schools for students to be engaged in creative activity to produce creative works), and product creation (students' creative works).

Appreciation to the art inherited from the ancestors of Indonesia should be preserved over generations through formal education since early years of education in primary schools. The research has revealed that batik training can enhance the students' cognitive, psychomotoric, and affective behaviours and potentials. When the characteristics of art training that is adjusted to the competence, knowledge, and skills of primary school students, batik art training have the potential to develop into official education in formal education institutes with its specific techniques. Batik art can become a prospect for further development of the society and hence should be included in the curriculum of art and culture. As such, skillful teachers with excellent batik skills would be required in the future and this would start from existing teachers' willingness to learn and share with the younger generation.

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