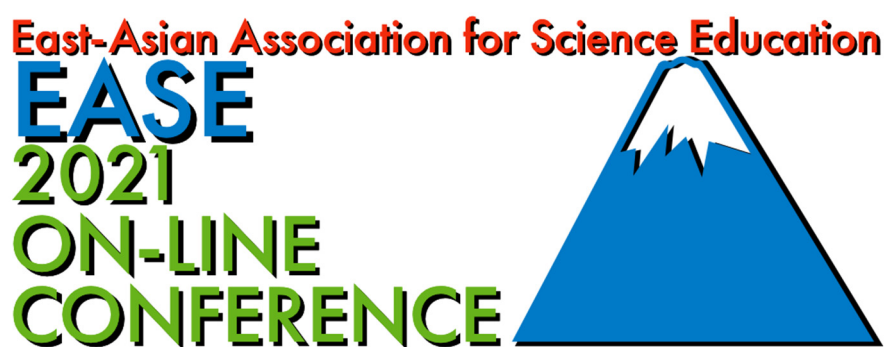


Conference Program Guide

(2021/06/15 Ver.1)



2021 International Conference of East-Asian Association for Science Education

Japanese Standard Time (JST) is GMT +9

GMT	JST	KST	CST	HKT	ICT	WIT	WITA	WIB
+0	+9	+9	+8	+8	+7	+9	+8	+7

=DAY1: June 18th (Fri.) =

Time (JST)	Contents							
09:30~10:20	Opening Ceremony							
10:30~11:30	Key note : Dr. Jeff Weld							
12:00~13:00	Tutorial Session							
13:00~14:30	Lunch time					EM Meeting		
						Chair Meeting		
14:30~16:00	Oral Session 1							
	Room 1 C3-1	Room 2 C3-2	Room 3 C3-3	Room 4 C4-1	Room 5 C5-1			
16:30~18:00	Oral Session 2							
	Room 1 C3-4	Room 2 C3-5	Room 3 C3-6	Room 4 C4-2	Room 5 C5-2			
18:30~19:30	Key note : Dr. Myeong kyeong SHIN							

=DAY2: June 19th (Sat.) =

Time (JST)	Contents							
10:30~11:30	Key note : Dr. Pradeep Maxwell Dass							
11:30~14:00	All-member's Meeting							
14:00~14:30	Break					Chair Meeting		
14:30~16:00	Oral Session 3							
	Room 1 C1-1	Room 2 C2-1	Room 3 C3-7	Room 4 C3-8	Room 5 C4-3	Room 6 C4-4	Room 7 C5-3	Room 8 C6-1
16:30~18:00	Oral Session 4							
	Room 1 C1-2	Room 2 C2-2	Room 3 C3-9	Room 4 C3-10	Room 5 C4-5	Room 6 C7-1		
18:30~19:30	Key note : Dr. John Stiles							

2021 International Conference of East-Asian Association for Science Education

Japanese Standard Time (JST) is GMT +9

GMT	JST	KST	CST	HKT	ICT	WIT	WITA	WIB
+0	+9	+9	+8	+8	+7	+9	+8	+7

=DAY3: June 20th (Sun.) =

Time (JST)	Contents							
09:30~10:20	Junior Session							
10:30~11:30	Key note : Dr. Gillian Roehrig							
11:30~12:30	Sponsor Session				EM Meeting (New member)			
					Editors Meeting (New member)			
12:30~13:00	Break				Chair Meeting			
13:00~14:30	Oral Session5							
	Room1 C1-3	Room2 C2-3	Room3 C3-11	Room4 C4-6	Room5 C5-4	Room6 C6-2	Room7 C7-2	
15:00~16:00	Member Group Session							
	Room1 EXPLORING SCIENCE TEACHER EDUCATION FOR CLIMATE CHANGE EDUCATION: CHALLENGES IN ASIAN COUNTRIES							
16:30~17:30	Key note : Dr. Yoshisuke KUMANO							
17:30~18:30	Closing Ceremony							

2021 International Conference of East-Asian Association for Science Education

Oral Session I	Day I (June 18 th)	14 : 30 ~ 16 : 00
Room I	C3-1	
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Prof. Indarini

Universitas Pakuan

=Presentation Program=

1-3-1-18-1 (FY1M-GYS3-UW021)

James Green (Chosun University)

1 Young-Shin Park

EXPLORING THE DEVELOPMENT OF COMPUTATIONAL THINKING PRACTICE GUIDELINES AND THEIR IMPLICATION AND APPLICABILITY IN STEAM LESSONS

2-3-1-18-2 (FY2V-F49U-EQ021)

Indarini Dwi Pursitasari (Universitas Pakuan)

2 Annisa Nurramadhani

Science Context-Based Inquiry Learning Model: Feasibility Study to Develop Students' Critical Thinking Skills and Science Literacy

3-3-1-18-3 (FXIH-KU7F-FO021)

Wai Wai Kyi (Hiroshima University)

3 Tetsuo Isozaki

Comparison of Science Education in Myanmar and Japan: Objectives and Contents Covered in Secondary School Science Curricula

4-3-1-18-4 (FY3F-FOFJ-VR021)

Nanda Syah Putra (Universitas Pendidikan Indonesia)

4 Anna Permanasari

School Community Perspective On Environmental Literacy

2021 International Conference of East-Asian Association for Science Education

Oral Session 1	Day1 (June 18 th)	14 : 30 ~ 16 : 00
Room2		C3-2
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Mr. Ari Syahidul Shidiq

Universitas Pendidikan Indonesia

=Presentation Program=

5-3-2-18-1 (FXBN-Z4ZI-K4021)

1 Nobuyuki KAWAI (Kobe Municipal Junior High School)

A NEW EXPERIMENT TO CHANGE NAÏVE CONCEPTIONS AS “ MOTION IMPLIES A FORCE ” INTO SCIENTIFIC CONCEPTIONS

6-3-2-18-2 (FXEI-AE2C-SV021)

2 Rogelio Bañares Lacorte, Jr. (PHINMA University of Iloilo)

Ryugo Oshima, Haruno Iwasaki

Japan' s Lower Secondary School Science Practices: A Filipino Science Teacher' s Viewpoints

7-3-2-18-3 (FYIJ-G200-QB021)

Shang Lingling (Northwest Normal University)

3 Hu Shengli

Constructing scientific explanations through DPIE: an exploratory study that supports students in constructing causal explanations

8-3-2-18-4 (FXIH-5U39-XQ021)

4 Kousuke SHIMADA (Hiroshima University)

Tetsuo ISOZAKI

The newly revised Course of Study for secondary schools and the Nature of Science in Japan

2021 International Conference of East-Asian Association for Science Education

Oral Session I	Day1 (June 18 th)	14 : 30 ~ 16 : 00
Room3		C3-3
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Prof. Anna Permanasari

Universitas Pendidikan Indonesia

=Presentation Program=

9-3-3-18-1 (FXJW-TF4V-9P021)

WENHUA CHANG (Grad. Inst. of Sci. Ed., National Taiwan Normal University)

1 CHENCHEN YEH, PEYING TSAI, HOMEI CHEN

ADAPTING AND ENACTING CROSS-DISCIPLINARY TOPICS INSTRUCTIONAL MATERIALS ON HETEROGENEOUS SEVENTH GRADERS' LEARNING PERFORMANCE

10-3-3-18-2 (FXP3-LBBG-Y4021)

Daiki Nakamura (Hiroshima University)

2 Hiroshi Unzai, Takuya Matsuura

Examining Factors That Influence the STEM Career Choices of Secondary School Students: Using Data from TIMSS 2019

11-3-3-18-3 (FXWS-GEA3-9R021)

Yuyu Rahayu (Science Education, Indonesia University of Education, Indonesia)

3 Irma Rahma Suwarna, Riandi, Eneng Rahmayanti and Santy Nurmalasari

INOVATE DEMONSTRATION METHOD ON STATIC ELECTRICITY TO IMPROVE STUDENT MOTIVATION

12-3-3-18-4 (FXYB-DOZC-RC021)

ANNA PERMANASARI (UNIVERSITAS PENDIDIKAN INDONESIA)

4 Anna Permanasari; Indarini Pursitasari; Bibin Rubini; Didit Ardianto; Irvan Permana

How Does Indonesia Student Reach PISA SCORE 500 on Science By 2025? Mutual Collaboration among Government, Professional Associations and Higher Education Institution for training Innovative science Learning

2021 International Conference of East-Asian Association for Science Education

Oral Session 1	Day1 (June 18 th)	14 : 30 ~ 16 : 00
Room4		C4-1

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Wei, Dong-Ying	Beijing Normal University
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=Presentation Program=

13-4-1-18-1 (FY5F-OZVW-9J021)
Ratiporn Munprom (Kasetsart university)
1 Sutasinee Kityakarn, Pattamaporn Pimthong, Tassaneewon Lertcharoenrit, Songchai Ugsonkid
<i>Promoting Design Thinking of High School Student through STEM Partnership for Design-based Learning in PM 2.5 Crisis</i>

14-4-1-18-2 (FY50-GSCW-KW021)
Roseleena Anantanukulwong (Kasetsart University)
2 Surasak Chiangga and Pongprapan Pongsophon
<i>Investigating the Funds of Knowledge in Muslim Culture in the Deep South of Thailand for Culturally Responsive Physics Education</i>

15-4-1-18-3 (FY6M-P290-OV021)
Qingchen Yao (Xian Middle School of Shaanxi Province,)
3 Wenhua Zhang
<i>An empirical study on the influence of chemical concept teaching on students' model cognitive ability based on model cognition</i>

16-4-1-18-4 (FY5S-VNLS-2V021)
Naoko KOSAKA (Graduate School of Science and Technology, Shizuoka University)
4 Yoshisuke KUMANO
<i>Comparative Study of Japanese and American High School Biology Textbooks -Focusing on the impact of the STEM education reform by NGSS-</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 1	Day1 (June 18 th)	14 : 30 ~ 16 : 00
Room5	C5-1	
【Category】	5: Science Education for Undergraduate or Graduate School Students	

=Chairperson=

Prof. Chin-Fei Huang	National Kaohsiung Normal University
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=Presentation Program=

	17-5-1-18-1 (FXWO-UIAG-C6021)
1	Riandi RIANDI (Universitas Pendidikan Indonesia) Irma Rahma Suwarma, Anna Permanasari, Yoshisuke Kumano <i>Exploring the Obstacles of Prospective Science Teachers in Developing STEM Lesson Plans</i>
	18-5-1-18-2 (FXJT-VHZO-RX021)
2	Ngoc-Huy Tran (National Kaohsiung Normal University) Chin-Fei Huang <i>Orientation of Educational Content for Science Pedagogy Students to Fulfill the Teaching Requirements of Sustainable Development Goals</i>
	19-5-1-18-3 (FXIB-Z303-SG021)
3	HU TAO (East China Normal University college of teacher education) Jing Yang <i>A learning cycle approach to promote Pre-service Science Teachers' NOS Views</i>
	20-5-1-18-4 (FY18-KMTM-ZB021)
4	Eni Nuraeni (Universitas Pendidikan Indonesia) Irma Rahma Suwarna <i>IDENTIFYING STUDENTS COLLABORATION SKILLS ON SOLVING FOOD SUSTAINABILITY ISSUES THROUGH STEM COURSE</i>
	21-5-1-18-5 (FY84-ASEV-MI021)
5	Yu Lei (National Engineering Laboratory For Educational Big Data, Central China Normal University) Wenhua Zhang, Ye Chen <i>Atomic Structure Core Concepts Learning Progressions</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 2	Day1 (June 18 th) 16:30~18:00
Room 1	C3-4
【Category】	3: Science Education for Middle or Secondary School and Related Areas

=Chairperson=

Prof. Indarini

Universitas Pakuan

=Presentation Program=

22-3-4-18-1 (FY4G-GKXB-3Z021)

1 Yamashita Shuichi (Chiba National University)

Matsuda Kazukuni, Sugeno Hitomi

Development of digital worksheets for Japanese science lessons

23-3-4-18-2 (FY4G-RMJK-GB021)

PINIT KHUMWONG (Srinakharinwirot University)

2 Pinit Khumwong I, Navara Seetee, Chanyah Dahsah, Theerapong Sangpradit, Chaninan Pruekpramool, Tepkanya Promkatkaew

The Expanding STEM Education by Integrating Languages, Social, and Moral Aspects: Its Pros and Cons

24-3-4-18-3 (FY4W-LD7H-JD021)

NURUL FARACH (Indonesian Education university)

3 Parsaoran, Irma Rahma, Arizaldy, Linda kusumawati

THE URGENCY OF STUDENT NEEDS THROUGH STEMS (SCIENCE, TECHNOLOGY, ENGINEERING, MATHEMATICS, AND SOCIAL) LEARNING APPROACHES BASED ON ENVIROMENTAL INSIGHTS IN THE PANDEMIC PERIOD

25-3-4-18-4 (FXII-5NZP-RO021)

Yuki Aono (Hiroshima University)

4 Tetsuo Isozaki

THE FEATURES OF "BIOLOGY" AS ESTABLISHED IN JAPAN' S SECONDARY EDUCATION IN 1942

2021 International Conference of East-Asian Association for Science Education

Oral Session 2	Day1 (June 18 th)	16 : 30 ~ 18 : 00
Room2		C3-5
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Mr. Ari Syahidul Shidiq

Universitas Pendidikan Indonesia

=Presentation Program=

26-3-5-18-1 (FY3R-80X7-VS021)

- 1 PONGPRAPAN PONGSOPHON (Kasetsart University)
MODELING OF THE STUDENT-RELATED FACTORS AFFECTING SCIENCE ACHIEVEMENT OF EIGHTH GRADE SINGAPOREAN STUDENTS IN TIMSS 2019

27-3-5-18-2 (FY30-EGYJ-IZ021)

- Hina Morishige (Graduate School of Education, Chiba University)
2 Tetsuya Kato, Kazunori Yoshimoto
DEVELOPMENT OF TEACHING MATERIAL FOR RADIATION PROTECTION THROUGH A MODEL EXPERIMENT IN JUNIOR HIGH SCHOOL USING ULTRAVIOLET LED

28-3-5-18-3 (FY3U-D88N-HP021)

- Supansa Khansumrit (Srinakharinwirot University)
3 Navara Seetee
CREATIVE PROBLEM-SOLVING ABILITIES OF THAI MIDDLE SCHOOL STUDENTS IN SPECIAL SCIENCE-MATH CLASS

29-3-5-18-4 (FY3X-TJKX-YW021)

- 4 Heesoo Ha (Center for Educational Research, Seoul National University)
Exploring the features of argumentation subsequent to hands-on activities in the biology classroom

2021 International Conference of East-Asian Association for Science Education

Oral Session 2	Day1 (June 18 th)	16 : 30 ~ 18 : 00
Room3		C3-6
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Prof Anna Permanasari

Universitas Pendidikan Indonesia

=Presentation Program=

30-3-6-18-1 (FY3F-DPLC-R6021)

Chanyah Dahsah (Srinakharinwirot University)

- 1 Chaninan Pruekpramool, Navara Seetee, Pinit Khumwong, Tepkanya Promkatkeaw, Theerapong Sangpradit, Siwaporn Lamainil

A GUIDELINE FOR GIFTED AND TALENTED MIDDLE SCHOOL STUDENTS IN SCIENCE, MATHEMATICS, AND TECHNOLOGY PROJECT COURSES

31-3-6-18-2 (FY4H-IYK7-KN021)

Indrawati (The University of Jember)

- 2 Sutarto

THE EFFECT OF STUDENTS' CRITICAL THINKING AND COLLABORATION SKILL THROUGH GI-GI (GROUP INVESTIGATION-GUIDED INQUIRY) LEARNING MODEL

32-3-6-18-3 (FY68-IIKS-N4021)

Arizaldy (Science Education, Indonesia University of Education, Indonesia)

- 3 Irma Rahma, Harry Firman, Linda Kusumawati, Nurul Farach

REPRESENTATION OF ENVIRONMENTAL POLLUTION CONCEPT THROUGH MEDIA WITH LUBUK LARANGAN LOCAL WISDOM IN JUNIOR HIGH SCHOOLS

33-3-6-18-4 (FXJF-ZBKX-OT021)

Yuya Nakanishi (Hiroshima University)

- 4 Tetsuo Isozaki, Takehiro Hayashi

THE PURPOSES AND CONTENTS OF NATURAL RESOURCES EDUCATION AT SECONDARY SCHOOLS IN JAPAN BEFORE WORLD WAR II

2021 International Conference of East-Asian Association for Science Education

Oral Session 2

Day1 (June 18th) 16:30~18:00

Room4

C4-2

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Li, Gao-Feng

Shaanxi Normal University

=Presentation Program=

34-4-2-18-1 (FXJY-Z8HL-1U021)

Erkki T. Lassila (University of Oulu)

1 Manabu Sumida

THE PLACE-BASED NATURE OF THEMATIC RESEARCH ACTIVITIES IN JAPANESE SUPER SCIENCE HIGH SCHOOLS (SSH)

35-4-2-18-2 (FXNU-04T3-1T021)

Hsuang-Ming Tseng (National Changhua University of Education)

2 Hsiao-Lin Tuan

Development and Discussion of the Acceptance Model of Emerging Technology Courses: Take the artificial intelligence course for high school students as an example.

36-4-2-18-3 (FXWT-843A-12021)

Sucie Nuryani (Student, Indonesia University of Education)

3 Irma Rahma Suwarma, Dadi Rusdiana

FEASIBILITY ANALYSIS OF THE DEVELOPMENT OF STEM-BASED PHYSICS MODULE WITH SELF REGULATED LEARNING FOR SENIOR HIGH SCHOOL

37-4-2-18-4 (FY35-JQMV-88021)

Ujang Fahmi Abdillah (University of Jember)

4 I Ketut Mahardika, Indrawati

THE EFFECT OF THE TPACK-BASED PHYSICS MODULE AND THE MULTI-REPRESENTATION OF WORK AND ENERGY MATERIALS TO IMPROVE CRITICAL THINKING SKILLS AND LEARNING OUTCOMES OF GRADE 10th OF HIGH SCHOOL STUDENTS

2021 International Conference of East-Asian Association for Science Education

Oral Session 2	Day1 (June 18 th)	16 : 30 ~ 18 : 00
Room5		C5-2
【Category】	5: Science Education for Undergraduate or Graduate School Students	

=Chairperson=

Prof. Chin-Fei Huang	National Kaohsiung Normal University
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=Presentation Program=

38-5-2-18-1 (FY63-7PBK-GK021)
Tomotaka KURODA (Shizuoka University)
1 <i>Evaluation of a First-Year Experience Program Developed on the Basis of Learning Characteristics of STEM Human Resources: A Focus on the Elements of a Generic Competency Model</i>
39-5-2-18-2 (FY5H-D6K2-KZ021)
Wanpen Kamtet (Kasetsart University, Kamphaeng-Saen Campus, Thailand)
2 Tussatrin Wannagatesiri
<i>The Development of Biology Student Teachers' Scientific Explanation Abilities by using the Problem Solving of Context - rich Problems Model</i>
40-5-2-18-3 (FY5M-ZTC6-H8021)
Duangjan Kaewkongpan (Kasetsart University, Kamphaeng Saen Campus)
3 Tussatrin Wannagatesiri
<i>The Development of Pre-service Science Teachers' Pedagogical Content Knowledge: Case of Adapting and Designing Learning Materials</i>
41-5-2-18-4 (FY4L-4DH7-RF021)
Yong XIE (Beijing normal university)
4 Chun-ping LIU, Chang-qiu YI, Xin-yue JIAO and Ning MA
<i>RESEARCH ON THE PATTERNS OF COLLABORATIVE SCIENTIFIC ARGUMENT IN DIFFERENT COGNITIVE STYLE GROUPS</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room 1	C1-1	

【Category】 1: Science Education for Young Children and Related Areas

=Chairperson=

Assist. Prof. Witat Fakchareonphol	Kasetsart University (Kamphaeng saen campus)
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=Presentation Program=

42-1-1-19-1 (FY5Y-Y7CB-3Z021)
Rossama Lumputha (Srinakharinwirot University)
1 Chanyah Dahsah
<i>The Effects of Online Inquiry - Based Learning on Upper Secondary School Students' Collaboration Skills</i>

43-1-1-19-2 (FY62-GCWF-N5021)
Wei Hung, Huang (NTNU University)
2 Chun-Yen Chang, Wan-Ching Tseng
<i>Advancing children' s engaging in hands-on Mathematics Classroom</i>

44-1-1-19-3 (FY6Z-CJVT-BZ021)
Yu Wang (Hefei No.6 Middle School, Anhui Province, China)
Wenhua Zhang, Qiping Hu, Guangming Zhu
3 <i>From the perspective of PCK, a comparative study on the discourse analysis of college students' volunteer teaching -- a case study of the college students' volunteer teaching classroom discourse analysis of the "Sunshine Volunteer teaching" activity sponsored by Central China Normal University</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room2		C2-1

【Category】 2: Science Education for Elementary School and Related Areas

=Chairperson=

Dr. YIP, Valerie W.Y.	The University of Hong Kong
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=Presentation Program=

45-2-1-19-1 (FYCO-82SV-09021)
1 Hasan Uştu (Turkish Ministry of Education)
Tomoki Saito
<i>A Lesson Preparation Method for Art Integrated STEAM: TA-SM-EA</i>

46-2-1-19-2 (FY4W-TIFR-03021)
2 SHIH-JUNG HUANG (Department of Science Education, National Taipei University of Education)
Tian-Da Hsieh
<i>Explore the learning of digital sensors and traditional glass tube thermometers in the fifth grade elementary school</i>

47-2-1-19-3 (FY5S-QXXZ-MY021)
3 Audchara Onpan (Srinakharinwirot University)
Tepkanya Promkatkeaw
<i>THE STUDY OF CRITICAL THINKING SKILL OF UPPER ELEMENTARY SCHOOL STUDENTS IN THAILAND</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room3	C3-7	
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Dr. Pramudya Dwi Aristya Putra

Universitas Negeri Jember

=Presentation Program=

48-3-7-19-1 (FY4J-LMDT-3J021)

SRI WAHYUNI (University of Jember)

1 Supeno, Iwan Wicaksono, Zainur Rasyid Ridlo

Critical Thinking Blended Learning (CTBL) as a Teaching Model of Students Critical Thinking Skills

49-3-7-19-2 (FY4K-OJRL-EW021)

Hui-Shan Lin (National Changhua University of Education)

2 Meichun Lydia Wen

A design-based learning program for gifted learners developed by an interdisciplinary community of practice: A case study

50-3-7-19-3 (FY4Q-NULL-I2021)

Chen-Chen Yeh (Sanxia Junior High School, New Taipei City, Taiwan, R.O.C.)

3 Wen-Hua Chang

A Biology Teacher's Reflection about Applying Slowmation Learning Tasks on Students' Representations of System and Scale

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room4		C3-8
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Dr. Irma Rahma Suwarma

Universitas Pendidikan Indonesia

=Presentation Program=

51-3-8-19-1 (FY4R-38YG-HX021)

Chaninan Pruekpramool (Srinakharinwirot University)

1 Chanyah Dahsah, Theerapong Sangpradit, Pinit Khumwong

EXPLORING THE MULTIPLE PERSPECTIVES ABOUT THAI SECONDARY STUDENTS' SCIENTIFIC SENSEMAKING

52-3-8-19-2 (FY62-6AW6-T0021)

2 Ippei MINETA (University of Tsukuba)

Changes in the Processes of Inquiry and the Scientific Methods in the Transition of the Courses of Study: The Case of Junior High School Science

53-3-8-19-3 (FXIM-JDF4-EV021)

Santy Nurmalasari (Science Education, Indonesia University of Education, Indonesia)

3 Irma Rahma Suwarna, Gregory Shaw, Asep Supriatna, Yuyu Rahayu and Eneng Rahmayanti

KELING MITBAN: LEARNING MEDIA FOR FLOOD MITIGATION AND CRITICAL THINKING FOR DISASTER PREVENTION FOR INDONESIAN JUNIOR HIGH SCHOOL STUDENTS

54-3-8-19-4 (FY63-DSW7-IQ021)

4 Hisashi OTSUJI (Toyo University)

THE PHILOSOPHICAL BACKGROUND OF ART IN STEAM EDUCATION: A PRACTICAL TRIAL FOR PROSPECTIVE SCIENCE TEACHERS IN JAPAN

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room5		C4-3

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Zhang, Bao-Hui	Shaanxi Normal University
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=Presentation Program=

	55-4-3-19-1 (FX0-PE03-6R021)
1	Younkyeong Nam (Pusan National University) Jinmong Shin <i>High School Girl's System Thinking Skills about the Carbon Cycle</i>
	56-4-3-19-2 (FY3B-A6HV-YW021)
2	Idris Solola (Ehime University) <i>The Impact Of Integrating Entrepreneurship Management In Teaching Chemistry Among Academics Of Selected Institutions</i>
	57-4-3-19-3 (FY3J-SW29-CU021)
3	Go Tanaka (Shizuoka University) Takanori Kakutani, Yoshiyuki Gunji <i>Blended Learning Practise of Basic Biology "Immunity" Using Video Materials in High School</i>
	58-4-3-19-4 (FY3U-DW0H-4L021)
4	Apiradee Pansing (Srinakharinwirot University) Chanyah Dahsah <i>A Study of Critical Thinking of Upper Secondary School Student on Fossil Fuels Using Thinking Aloud Technique</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 3

Day2 (June 19th) 14:30~16:00

Room6

C4-4

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Yao, Jian-Xin

Beijing Normal University

=Presentation Program=

59-4-4-19-1 (FXIX-YQ4L-FM021)

Cheng-Chueh Liu (Graduate Institute of Science Education, National Taiwan Normal University)

Ying-Shao Hsu

TEACHERS' REFLECTIONS ON HOW SSI CURRICULUM PROMOTES STUDENT SCIENTIFIC LITERACYS

60-4-4-19-2 (FY4D-WLBO-2R021)

Waralee Sinthuwa (Faculty of education, Kasetsart university)

Chatree Faikhamta, Pattamaporn Pimthong, Sasithev Pitipornatapin

Environmental Conservation: Indigenous Science in Thai Urban Society

61-4-4-19-3 (FY6P-DMIC-D2021)

Yi Liu (Central China Normal University)

Guofeng Zhang, Wenhua Zhang, Peixing Li, Yuejiong Su

Research on PCK Integration Mechanism of Preservice Chemistry Teachers

62-4-4-19-4 (FY7K-OOQG-L6021)

Pingping Wang (Northwest Normal University)

Research on Teaching Design of Electrochemistry Core Concepts in Senior High School Based on Learning Progression Theory

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room7	C5-3	
【Category】	5: Science Education for Undergraduate or Graduate School Students	

=Chairperson=

Prof. Mei-Chun Lydia Wen National Changhua University of Education

=Presentation Program=

63-5-3-19-1 (FY63-WTML-XA021)

Siriporn Kruatong (Kasetsart University, Kamphaeng Saen Campus)

1 Tussatrin Wannagatesiri

ENHANCING SCIENCE STUDENTS TEACHERS' SCIENTIFIC LITERACY AND TEACHING PREPARATIONS THROUGH ONLINE LEARNING CONTEXT

64-5-3-19-2 (FY6N-JGBS-6Y021)

Wenhua Zhang (Central China Normal University)

2 Zuhao Wang, Guo-feng Zhang, Zhu-yan Song, Liu Yi

Research on the Development of Pre-service Chemistry Teachers' Pedagogical Content Knowledge

65-5-3-19-3 (FY6T-S442-UK021)

Zhu-yan Song (No. 6 Middle School of Harbin)

3 Wenhua Zhang ; Zuhao Wang

A Study on the Standards of Excellence for Chemistry Teachers and PCK Level Survey

66-5-3-19-4 (FY4K-8G59-RP021)

R. Ahmad Zaky El Islami (Kasetsart University)

Chatree Faikhamta, Samia Khan, Nguyen Van Bien, Indah Juwita Sari, Song Xue, Le Hai My

4 Ngan, Vipavadee Khwaengmake, Nguyen Thi To Khuyen, Thauresean Prasoplarba, Anupong Praisri

DEVELOPING PRE-SERVICE SCIENCE TEACHERS' ABILITY TO TEACH THE MII-STEM APPROACH THROUGH MICROTEACHING

2021 International Conference of East-Asian Association for Science Education

Oral Session 3	Day2 (June 19 th)	14 : 30 ~ 16 : 00
Room8	C6-1	
【Category】	6: Science Education for Informal Setting or Life-Long Learning or In-Service Teacher training	

=Chairperson=

Prof. myeong-kyeong shin

Gyeongin National Univ. of Ed

=Presentation Program=

67-6-1-19-1 (FXD4-0T91-2I021)

Takekuni YAMAOKA (Tokai Gakuen University)

1 Tetsuya YAMADA

A Research-Based Instructional Model for Promoting Scientific Thinking in STEM-Practicing Schools in Japan

68-6-1-19-2 (FXNT-K4AB-0A021)

Nurul F. Sulaeman (Mulawarman University)

2 Pramudya D. A. Putra, Yuki Yasuma, Ippei Mineta, Hiroki Hakamada, Yoshisuke Kumano

EXPLORING STUDENTS' ENGAGEMENT IN AFTER-SCHOOL STEM PROGRAM FROM GENDER PERSPECTIVES

69-6-1-19-3 (FY4C-DHO5-SY021)

Nina Rosliana (Universitas Pendidikan Indonesia)

3 Anna Permanasari, Nahadi

LOW CARBON BEHAVIOR OF WASTE MANAGEMENT PROSPECTIVE INSTRUCTORS: A CASE STUDY IN ONE VILLAGE OF WEST JAVA-INDONESIA

70-6-1-19-4 (FY4X-DG02-SM021)

Phattraporn Thongkesorn (Srinakharinwirot University)

4 Chanyah Dahsah

THE CAUSAL RELATIONSHIP MODEL OF FACTORS AFFECTING THE DECISION TO PARTICIPATE IN THE EDUCATION PROGRAMS IN THE SCIENCE MUSEUM OF UPPER ELEMENTARY STUDENTS

2021 International Conference of East-Asian Association for Science Education

Oral Session 4	Day2 (June 19 th)	16 : 30 ~ 18 : 00
Room 1		C1-2

【Category】 1: Science Education for Young Children and Related Areas

=Chairperson=

Assist. Prof. Witat Fakchareonphol	Kasetsart University (Kamphaeng saen campus)
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=Presentation Program=

71-1-2-19-1 (FXG5-3QC8-4F021)
1 Jing-Wen Lin (Department of Science Education, National Taipei University of Education) Yi-Yen Lee <i>A systematic review of phases and cycles of model(ing)-based inquiry</i>
72-1-2-19-2 (FY4N-LU6T-DG021)
2 Vipavadee Khwaengmek (Kasetsart FY4N-LU6T-DG021 University (Bangkhen Campus)) Chatree Faikumta <i>Pre-service Science Teacher Reflective thinking involving STEM teaching</i>
73-1-2-19-3 (FY4T-27LH-WJ021)
3 Titisan Rumchatsakul (Srinakharinwirot University) Navara Seetee <i>THE TREND OF MIDDLE SCHOOL STUDENTS' SCIENTIFIC REASONING ABILITIES IN THAILAND</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 4	Day2 (June 19 th)	16 : 30 ~ 18 : 00
Room2		C2-2

【Category】 2: Science Education for Elementary School and Related Areas

=Chairperson=

Dr. LI, Wai Chin	The Education University of Hong Kong
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=Presentation Program=

74-2-2-19-1 (FY50-MDJE-5G021)

- Winnie Wing Mui SO (Department of Science and Environmental Studies, The Education University of Hong Kong, Hong Kong Special Administrative Region, the People' s Republic of China / Centre for Education in Environmental Sustainability, The Education University of Hong Kong, Hong Kong Special Administrative Region, the People' s Republic of China)

Qianwen HE

ENGAGING STUDENTS WITH INTELLECTUAL DISABILITY IN STEM LEARNING

76-2-2-19-3 (FY5Z-8T3W-G0021)

Tawinan Saengkhattiya (Brunel University London)

- 2 Mike Watts, Sarmin Hossain

Framework for developing STEM activities for teaching sustainable development and 21st century skills in Gifted science pupils at primary school level in Thailand

2021 International Conference of East-Asian Association for Science Education

Oral Session 4	Day2 (June 19 th)	16 : 30 ~ 18 : 00
Room3	C3-9	
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Dr. Pramudya Dwi Aristya Putra

Universitas Negeri Jember

=Presentation Program=

77-3-9-19-1 (FY4Y-3MDN-UG021)

- 1 Hung Ming CHEN (Taichung Municipal Shi-Yuan Senior High School)

Seventh Graders' Multimodal Modeling of Ecosphere

78-3-9-19-2 (FY4H-16Z3-YQ021)

Pramudya Dwi Aristya Putra (The University of Jember)

- 2 Nur Ahmad, Idrawati, Sutarto, I Ketut Mahardika

The Enhancement of Students' Critical Thinking Skills Using Engineering Design Process Approach in The Science Classroom

79-3-9-19-3 (FY50-CDLV-1H021)

NIKMATIL HASANAH (University of Jember)

- 3 SUTARTO, NURIMAN

IMPROVING CREATIVE THINKING SKILLS OF STUDENTS THROUGH STEM ACTIVITY IN COLLOID TOPIC (SOAP-MAKING EXPERIMENTS)

80-3-9-19-4 (FY52-WIKQ-L6021)

THANAWAT NGAODA (Faculty of Education, Kasetsart University (Bangkhen Campus))

- 4 Assoc. Prof. Sasithev Pitipornatapin

Promoting Students' Achievement and Argumentation skills Using Online Socio Scientific Issue-based Teaching in the Topic of Genetics Engineering

2021 International Conference of East-Asian Association for Science Education

Oral Session 4	Day2 (June 19 th)	16 : 30 ~ 18 : 00
Room4	C3-10	
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Dr. Irma Rahma Suwarma

Universitas Pendidikan Indonesia

=Presentation Program=

81-3-10-19-1 (FXYC-2N7M-N1021)

BIBIN RUBINI (PAKUAN UNIVERSITY)

1 Anna Permanasari, Iqbal Habiby

Infusing Education for Sustainability Development in Science Learning: How the Nature of Science of the secondary school students' growing up along on-line learning with Socio Scientific Issues based

82-3-10-19-2 (FY0X-89NK-IL021)

Nindy Lestarie (Indonesia University of Education)

2 Anna Permanasari, Ida Hamidah

Science competency profile of secondary school students in the context of ESD on the environmental pollution theme

83-3-10-19-3 (FYPZ-FX55-DT021)

Pedro DE PAULA TERRA (Chiba University)

3 Hina MORISHIGE, Futaba SUYAMA, Tetsuya KATO

Expedition Mundus in Japan: fostering scientific literacy through a classroom game

84-3-10-19-4 (FYIK-GVWJ-RO021)

Liang Sanxia (Northwest Normal University)

4 Hu Shengli

Design of Project Based Learning activities based on STEM education —Take making a simple water purifier as an example

2021 International Conference of East-Asian Association for Science Education

Oral Session 4

Day2 (June 19th) 16:30~18:00

Room5

C4-5

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Zhang, Bao-Hui

Shaanxi Normal University

=Presentation Program=

85-4-5-19-1 (FY5P-YMRC-Q0021)

1 Irvan Permana (Universitas Pakuan)

Suci Siti Lathifah, Herlina

Students' critical and creative thinking skills in learning by using anion cation disc media

86-4-5-19-2 (FY4K-ER66-BC021)

2 Jirawan Nucharoen (Srinakharinwirot University)

Chanyah Dahsah

Understanding Upper Secondary School Students Scientific Literacy about Food and Nutrition

87-4-5-19-3 (FY4K-S60Z-VO021)

Indah Juwita Sari (Kasetsart University)

3 Pongprapan Pongsophon, Wanwipa Vongsangnak

THE ANALYSIS OF ITEM DIFFICULTIES OF COMPUTATIONAL THINKING TEST USING RASCH MODEL

88-4-5-19-4 (FXIS-OUSM-9P021)

Junye Gao (Hiroshima University)

4 Tetsuo Isozaki

SCIENTIFIC INQUIRY IN CHINESE AND JAPANESE UPPER SECONDARY SCHOOL SCIENCE CURRICULA

2021 International Conference of East-Asian Association for Science Education

Oral Session 4

Day2 (June 19th) 16:30~18:00

Room6

C7-1

【Category】 7: Science Education for Policies and Others

=Chairperson=

Prof. Tetsuo Isozaki

Hiroshima University

=Presentation Program=

89-7-1-19-1 (FXH5-H7J1-ZA021)

1 Tomoki Saito (Juntendo University)

Role of the Crosscutting Concepts in Science Curricula: A Historical Account for STEM Integration

90-7-1-19-2 (FY3Q-0MUQ-EF021)

Tepkanya Promkatkeaw (Srinakharinwirot University)

2 Chanyah Dahsah, Worawarong Rakreungdet, Thanapun Charlee

How to Sustain the Project for Enhancing the Development of Science, Mathematics, and Technology Teaching and Learning in Local Schools: Views from Practitioners

91-7-1-19-3 (FY6S-XWQ1-ZM021)

Guo-feng Zhang (Wentao Middle School, Hangzhou, Zhejiang Province, China)

3 Wenhua Zhang, Zuhao Wang

Research on the Difference of PCK Integration Mechanism between Specialist Teachers and Pre-service Teachers— Taking the "Chemical Equilibrium State" of Senior High School Education Edition as an Example

92-7-1-19-4 (FY5Q-67EO-EU021)

Pei-Chen Wu (National Dong Hwa University)

4 Chih-Hsiung Ku

How do people READ the internet rumors of COVID-19 with the science perspective?

2021 International Conference of East-Asian Association for Science Education

Oral Session 5	Day3 (June20 th)	13 : 00~14 : 30
Room I		C1-3

【Category】 I: Science Education for Young Children and Related Areas

=Chairperson=

Assist. Prof. Chaninan Pruekpramool	Srinakharinwirot University
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=Presentation Program=

93-1-3-20-1 (FY4T-OWOR-1A021)

Jirayute Ruennakarn (Srinakharinwirot University)

1 Chaninan Pruekpramool

A STUDY OF THAI EIGHTH GRADE STUDENTS SCIENTIFIC PROBLEM - SOLVING ABILITY ON THE TOPIC OF GLOBAL AND NATURAL RESOURCES

94-1-3-20-2 (FY4U-CRTL-NX021)

Tian-Da Hsieh (National Taipei University of Education)

2 Shih-Jung Huang

Exploring the cognitive learning of the causes of the moon phases in the fifth grade of elementary school

95-1-3-20-3 (FY50-GQA1-CL021)

Suppamai Promkaew (Kasetsart University)

3 Vudipong Davivongs and Pongprapan Pongsophon

A Case Study of Thai Teachers Implementing Gardening Education for Green Design Project on Their Understanding of Engineering Design Process

96-1-3-20-4 (FY5I-C2C3-3W021)

Yuan-Li Liu (Graduate Institute of Science Education, National Taiwan Normal University)

4 Fang-Ying Yang

USING EYE TRACKING METHOD TO EXPLORE THE SCIENCE LEARNING PROCESS IN A DIGITAL DYNAMIC AND INTERACTIVE LEARNING ENVIRONMENT

2021 International Conference of East-Asian Association for Science Education

Oral Session 5

Day3 (June20th) 13:00~14:30

Room2

C2-3

【Category】 2: Science Education for Elementary School and Related Areas

=Chairperson=

Dr. LI, Wai Chin

The Education University of Hong Kong

=Presentation Program=

97-2-3-20-1 (FXY1-AWWJ-LT021)

DongYoung Lee (Pusan National University)

1 Younkyeong Nam

Elementary Student's Perception Changes about Their Creativity During Engineering Design Process

98-2-3-20-2 (FXI8-K673-S0021)

LIN MEIHUI (National Taipei University of Education Department of Natural Science Education)

2

A Study on the Learning Effectiveness of STEM Education in the Sixth Grade of Elementary School

99-2-3-20-3 (FXZ0-7RON-79021)

Ying-Tai Hsu (National Changhua University of Education)

3 Silvia Wen-Yu Lee, Kun-Hung Cheng

Investigating the impact of advance organizers in an immersive virtual reality environment for science learning

100-2-3-20-4 (FY09-WK6R-OM021)

Tetsuya YAMADA (Minatogawa College)

4 Mao KOSAKA, Takekuni YAMAOKA

A Study of the Educational Methods for Computational Thinking in Elementary STEM Education

120-2-3-20-5 (FY50-GQM5-BJ021)

Pattaraporn Pikunkwan (Kasetsart University)

5 Jeerawan Ketsing

Primary School Students' Social Skills in Science Classroom: A Confirmatory Factor Analysis

2021 International Conference of East-Asian Association for Science Education

Oral Session 5	Day3 (June20 th)	13 : 00~14 : 30
Room3	C3-11	
【Category】	3: Science Education for Middle or Secondary School and Related Areas	

=Chairperson=

Dr. Nurul Fitriyah Sulaiman

Universitas Mulawarman

=Presentation Program=

101-3-11-20-1 (FY5M-W0IR-T0021)

1 Ka Lok Cheng (The University of Hong Kong)

Taming nanotechnology into curriculum content: Textbook analysis through the lens of dark pedagogy

102-3-11-20-2 (FY5L-K4G3-VN021)

2 Sunisa Numdee (Srinakharinwirot University)

Theerapong Sangpradit

EXPLORING 7th GRADE STUDENTS' SCIENTIFIC ARGUMENTATION SKILLS

103-3-11-20-3 (FY60-EEQQ-6L021)

3 Xie Xiaoyu (Beijing Normal University)

Luo Ying

USING PBL IN CHINESE PHYSICS CLASS: A NEW INSTRUCTIONAL MODE

104-3-11-20-4 (FY60-M6O6-08021)

4 Gao Ling (Capital Normal University)

Qi Yan, Zhang Yingzhi

Analysis of the Image of Scientists Portrayed in Chinese Science Textbooks

2021 International Conference of East-Asian Association for Science Education

Oral Session 5

Day3 (June20th) 13:00~14:30

Room4

C4-6

【Category】 4: Science Education for High School and Related Areas

=Chairperson=

Prof. Zhang, Ying-Zhi

Capital Normal University

=Presentation Program=

105-4-6-20-1 (FX8R-R53I-L9021)

Stephen Okonkwo (Faculty of Education, Chiba University)

1 Jun Nomura

CONDITION OF SCIENCE EDUCATION IN NIGERIA: A COMPARATIVE ANALYSIS OF PUBLIC AND PRIVATE SCHOOL IN ABUJA, NIGERIA: SECOND REPORT

106-4-6-20-2 (FY40-M26D-13021)

Naphat Suknarusaitagul (Kasetsart University)

2 Chatree Faikhamta

Learning progression of grade 12 students' representational competence in electrochemistry during model-based learning

107-4-6-20-3 (FXIW-YKRW-KQ021)

Ying-Ju Chen (The National Kaohsiung Normal University)

3 Tai-Cheng Tso, Chia-Ju Liu

An Exploration of Senior Students' Mental States When Learning About Quadratic Function

108-4-6-20-4 (FY62-LVKJ-E0021)

Mengyun Xie (Beijing Normal University)

4 Ying Luo

Analyze The Students' Experimental Text of Chinese Mainstream High School Physics Textbooks From The Perspective of Scientific Inquiry

2021 International Conference of East-Asian Association for Science Education

Oral Session 5	Day3 (June20 th)	13 : 00~14 : 30
Room5	C5-4	
【Category】	5: Science Education for Undergraduate or Graduate School Students	

=Chairperson=

Prof. Mei-Chun Lydia Wen National Changhua University of Education

=Presentation Program=

109-5-4-20-1 (FY3G-MX8S-U5021)

1 Nuryani Rustaman (Universitas Pendidikan Indonesia)

SYSTEMS THINKING FOR LIFE-LONG LEARNING IN QUALITY SCIENCE EDUCATION

110-5-4-20-2 (FY2K-Q2SD-IK021)

Witchayada NAWANIDBUMRUNG (Waseda University)

2 Sara Samiphak, Noriyuki Inoue

MAKING SENSE OF TEACHERS' BELIEFS FOR EFFECTIVE IMPLEMENTATIONS OF INQUIRY-BASED LESSONS: THE NATURE OF HANDS-ON ACTIVITIES IN THE SCIENCE CLASSROOMS

111-5-4-20-3 (FY3L-WAHX-YZ021)

Sudarmin (Universitas Negeri Semarang)

3 W. Sumarni, S.Diliarosta, E. Pratiwi, and H. Pancawardani

DEVELOPING STUDENT'S LIFE SKILLS WITH THE MAKING OF BATIK METABOLITE FROM TAXUS SUMATRANA WITH ETHNO-STEM PROJECT LEARNING

112-5-4-20-4 (FY7S-7DO8-97021)

Wanting Qiao (Central China Normal University)

4 lan zhang; wenhua zhang

Pre-service chemistry teacher PCK to classroom practice Research on transformation process and influencing factors

2021 International Conference of East-Asian Association for Science Education

Oral Session 5	Day3 (June20 th)	13 : 00~14 : 30
Room6	C6-2	
【Category】	6: Science Education for Informal Setting or Life-Long Learning or In-Service Teacher training	

=Chairperson=

Prof. Hae-Ae Seo	Pusan National University
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=Presentation Program=

1	113-6-2-20-1 (FY4T-U86B-9E021) Shelly Efwinda (Mulawarman University) Nurul F. Sulaeman, Pramudya D.A. Putra <i>EXPLORING PHYSICS TEACHER READINESS TOWARD STEM EDUCATION IN INDONESIA</i>
2	114-6-2-20-2 (FY5G-EF8Q-0Z021) Ting-Hsuan Huang (Tatung University) Ming-Hsiu Mia Chen <i>EMOTIONS OF AUDIENCES TOWARDS ANIMATED SCIENCE VIDEOS</i>
3	115-6-2-20-3 (FY5S-6H6G-WQ021) Anupong Praisri (Kasetsart University) Chatree Faikhamta <i>EXPLORING SCIENCE TEACHERS' MODELLING PRACTICES THROUGH THE LENSES OF EPISTEMOLOGICAL MODELLING</i>
4	116-6-2-20-4 (FY6I-8XCD-P6021) Hsin-Yi Chiu (National Kaohsiung Normal University) Chia-Ju Liu <i>Develop cognitive structure tool that integrate self-discrepancy theory into STEM cognitive structure</i>

2021 International Conference of East-Asian Association for Science Education

Oral Session 5	Day3 (June20 th)	13:00~14:30
Room7		C7-2

【Category】 7: Science Education for Policies and Others

=Chairperson=

Prof. Hiroki Fujii	Okayama University
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=Presentation Program=

117-7-2-20-1 (FY62-LUMC-OF021)
Chatree Faikhamta (Kasetsart University)
1 Tharueseon Prasoplarb, Kornkanok Lertdechapat, Samia Khan, R. Ahmad Zaky El Islami, Nguyen Van Bien, Le Hai My Ngan, Song Xue, Vipawadee Kwangmek
<i>SCIENCE AND ENGINEERING PRACTICES IN SCIENCE CURRICULA: A COMPARATIVE ANALYSIS OF THAI, VIETNAMESE, INDONESIAN AND SCOTTISH CURRICULA</i>

118-7-2-20-2 (FY5E-MNM2-VD021)
Young-Shin Park (Chosun University)
2 Gyu-Jin Hwang
<i>The Development of the Global Energy STEAM program for Cultivating democratic citizen' s literacy and its implication in science education</i>

119-7-2-20-3 (FY6W-KDQ5-T9021)
Yue-jiong Su (Taiyuan No.61 Middle School)
3 Guo-feng Zhang, Wen-hua Zhang, Zu-hao Wang
<i>Research on the mechanism of integrating PCK knowledge between high school chemistry novice teachers and experiential teachers</i>
