



The International Conference on Science Education and Teachers Personnel Development

16 to 18 November 2021

Bandung, Indonesia

CONCEPT NOTE

BACKGROUND

The International Conference on Science Education and Teacher Professional Development is a biennially event of SEAMEO QITEP in Science (SEAQIS), where teachers, academics, researchers and education observers gather to inform, discuss, exchange and disseminate their best practices in facilitating the learning process. The conference will be conducted from 16 to 18 November 2021 in blended mode; online and face-to-face mode.

During the conference, SEAQIS will conduct the 3rd Ki Hajar Dewantara Award. Ki Hajar Dewantara (KHD) Award is an idea and initiative by SEAMEO QITEP in Science to honour and appreciate the science teachers who have dedicated their lives and effort to bring the teaching and learning process up to an excellent level. This concept derives from the inspiration of the founding father of National Education, the late Ki Hajar Dewantara for his unceasing commitment to make education a contribution towards human liberation.

GOALS

The purposes of this conference are:

1. to forum for teachers to disseminate their best practices and their research experience.
2. to foster cooperation and close relationships among SEAMEO Member Countries by means of better science education and a greater awareness of the place of science in society.
3. to commemorate the services of Ki Hajar Dewantara in forming national education system in both philosophy and practices;
4. to develop, advocate and reward excellence in science learning and teaching practices that contributes to the students' learning experience and outcomes;

5. to reinforce the concept of the teaching profession and science education development as a driving force in the regional progress leading collectively to prosperity and peace to the ASEAN Economic Community;

THEME

The theme of this year's conference is **Innovation in Science Teaching and Learning towards Industrial Revolution 4.0.**

DATE AND VENUE

The third Ki Hajar Dewantara Award will be conferred during the International Conference on Science Education from 16 to 18 November 2021 in a blended mode; online and face-to-face mode.

SPEAKERS

Prominent experts who consist of academics, researcher, and policy makers will share their knowledge and experience in this conference. Furthermore, there will be best science teachers representing seven countries in Southeast Asian region who will share their best practices in science education.

PARTICIPANTS

Online participants consisting of teachers, education personnel, policy makers, and students will be invited to attend the conference through Zoom Cloud Meetings or YouTube live streaming.

TENTATIVE AGENDA

15 November 2021

Arrival of Judges and Nominees

16 November 2021

Time	Activity
Opening Formalities Jayagiri Room	
8:00 - 8:05	Presentation of The Ki Hajar Dewantara Award Story Video
8:05 - 8:15	Traditional Dance Performance
8:15 - 8:20	SEAMEO Colours
8:20 - 8:25	SEAMEO Song
8:25 - 8:40	Welcome Remarks by the Director of SEAMEO QITEP in Science
8:40 - 8:55	Remarks by the Head of Bureau of Cooperation and Public Relations of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia
8:55 - 9:10	Remarks by the Director of SEAMEO Secretariat
9:00 - 9:15	Official Opening by the Secretary General of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia
9:15 - 9:20	Memorandum of Understanding Signing between SEAMEO QITEP in Science and System Dynamics Centre
9:20 - 9:30	Virtual Group Photo
9:30 - 10:00	Coffee Break
Best Practice Presentation by the 3rd Ki Hajar Dewantara Award Nominees Jayagiri Room	
10:00 - 10:15	Introduction of Board of Judges
10:15 - 10:50	Best Practice Presentation <i>Helping Students SOAR above the Challenges of Industry 4.0 through a Tiered STEM ALP</i> Mr Ang Peng Siang Singapore
10:50 - 11:25	Best Practice Presentation <i>Mini-Projector Design: Implementation of STEM Interdisciplinary Project to Stimulate Students' Skillsets for Industry 4.0</i> Ms Binar Kasih Sejati Indonesia
11:25 - 12:00	Best Practice Presentation <i>WE RISE: Wide-ranging Educational Research Initiatives for Student Engagement</i> Mr Joey Ian C. Singson Philippines
12:00 - 13:00	Lunch Break
13:00 - 13:35	Best Practice Presentation <i>Action Research on Note Taking and Making Using Mind Map in Learning Physics</i> Dr Makarimi bin Haji Awang Kassim Brunei Darussalam

Time	Activity
13:35 - 14:10	Best Practice Presentation <i>Simple Machine</i> Mr Mov Veasna Cambodia
14:10 - 14:45	Best Practice Presentation <i>Promoting and Establishing Innovative Creation Using STEM Activity Design in Learning Animal Behavior: A New Shift in Teaching Biology</i> Mr Kiettisak Inrajsadon Thailand
14:45 - 15:20	Best Practice Presentation <i>Improving Students' Understanding in Determining the Direction and Resolutions of The Forces Using I Force Innovation</i> Mr Mohd Azif bin Shukor Malaysia

17 November 2021

Time	Activity
8:30 - 8:35	Opening by MC
8:35 - 9:35	Keynote Address 1 <i>Science Education 4.0 – preparing K-12 students for a complex and fast-changing world</i> Dr. Connie Cirkony Research Fellow Monash University, Australia Moderator: Dr Ida Kaniawati, Expert of SEAMEO QITEP in Science
9:35 - 10:00	Coffee Break
10:00 - 11:00	Keynote Address 2 <i>Innovation in Science T&L: Towards IR 4.0, from a Teacher's Perspective</i> Mr Koh Chee Kiang The first place of the 2 nd Ki Hajar Dewantara Award Victoria School, Singapore Moderator: Dr Harry Firman, Expert of SEAMEO QITEP in Science
11:00 - 12:00	Keynote Address 3 <i>Education of Now in Industrial Revolution 4.0: A Much-Needed Preparation</i> Dr Zulfikar Alimuddin, B.Eng, MM Director Highly Functioning Education Consulting Services, Indonesia Moderator: Dr Harry Firman, Expert of SEAMEO QITEP in Science

Time	Activity
12:00 - 13:00	Lunch Break
Parallel Session	
<p>Room A Name of Room: Jayagiri Moderator: Zuhe Safitra, Head of Publications and Partnership Division of SEAMEO QITEP in Science</p>	
<p>Room B Name of Room: Argabinta Moderator: Lukman Nulhakim, Head of ICT, Data, and Evaluation Division of SEAMEO QITEP in Science</p>	
<p>Room C Name of Room: Wastukencana Room Moderator: Lintang Ratri Prastika, Human Resources Officer of SEAMEO QITEP in Science</p>	
13:00 - 13:30	<p>Room A <i>Enhancing Computational Thinking Skills Through STEM Learning Using Arduino Based Project</i> Lia Laela Sarah</p> <p>Room B <i>"Gotong Royong-Slide" (G-Slide) to Increase Active Participation and Collaborative Students on The Topic Excretion System.</i> Endar Madesa</p> <p>Room C <i>Application of 3PM (Three Point Method) To Enhance 21st Century Skills of Students Towards Education 4.0</i> Widya Grantina</p>
13:30 - 14:00	<p>Room A <i>Developing Interactive Mobile Learning Application "The Secrets of Gravity" for Senior High School Students Grade X</i> Agus Adibil Muhtar</p> <p>Room B <i>Vaccine Candidates Design Project-based Learning to Enhance Science Process Skills and Motivation</i> Ineke Elisabeth</p> <p>Room C <i>Development of Inquiry-Based Chemistry Digital Book to Improve Students Critical Thinking Ability</i> Petri Priyatni</p>

Time	Activity
14:00 - 14:30	<p>Room A <i>The Improvement of Student Creative Thinking Skill Through STEM Project of Bridge Construction Based on Newton's Law Using 3D Printing in Supporting Industrial Revolution 4.0</i> Astri Faizah</p> <p>Room B <i>Integrating Computational Thinking in Learning Through Simsketch Modeling to Improve Student Critical Thinking in Concept of Excretion Systems</i> Abdul Aziz Rahman</p> <p>Room C <i>Making of Natural Acid-Base Indicators (Extract of Mangosteen Peel, Bougenvillea Spectabilis, Alternanthera Leaf) with STEM Approach to Chemistry Subjects During the Covid-19 Pandemic</i> Meta Indah Agnetia</p>
14:30 - 15:00	<p>Room A <i>Synchronous and Asynchronous Virtual Classroom on Physics Learning Towards Industrial Revolution 4.0 at the Time of the Pandemic Covid-19</i> Kristian Dinata</p> <p>Room B <i>Using Google Earth in STEAM Problem-Based Learning on Water-Related Disaster Risks Reduction in Primary School</i> Dyan Widya Agustina</p> <p>Room C <i>The STEM Learning of Power Plants from Surrounding Materials Through Digital Literation to Increase Creativity Towards Industrial Revolution Era 4.0</i> Meydia Afrina</p>
15:00 - 15:30	Coffee Break
15:30 - 16:00	<p>Room A <i>Applying Physics Multirepresentation Worksheet Assisted by PHet in Flipped Classroom to Improve Students Scientific Skills</i> Putu Rusmila Dewi Kesiman</p> <p>Room B <i>The Use of Kelong Miniature Media and STEAM Method to Improve the Learning Outcomes of Class 7 Science at SMPN 10 Bintan</i> Suharyanto</p>

Time	Activity
	Room C <i>The Use of Seaqis Strategy Assisted by Adsoroid Media to Improve H-4 Students' Achievement in Learning Colloids at SMA Negeri 3 Malang</i> Luh Murniasih
16:00 - 16:30	Room A <i>The Implementation of STEM Project Based Learning Through the Building of Musical Instrument to Improve Student Creativity in Sound Wave Topic</i> Ismail Harianto Room B <i>Application of Robotic Technology in Climate Change Materials to Improve Learning Outcomes and Student Concern for the Environment</i> Julia Astutik
16:30 - 17:00	Room A <i>"Pesan Misteri", Fun Scientific Approach Using Ms Teams for Elementary Students' Remote Learning</i> Sulastri Room B <i>The Model of Physics Experiments Using Smartphone Sensors in Senior High School 1 Pangkalpinang</i> Herfien Rediansyah

18 November 2021

Time	Activity
8:30 - 8:35	Opening by MC
8:35 - 12:00	Workshop on Augmented Reality for Science Education facilitated by Assemblr
12:00 - 13:00	Lunch Break
13:00 - 13:15	Bamboo Music Performance: Arumba
13:15 - 13:45	Presentation of Certificate of Appreciation to All Nominees
13:45 - 14:00	Announcement and Awarding for the Winners by the Director of SEAMEO Secretariat
14:00 - 14:30	Speech by the Winners
14:30 - 15:00	Closing

19 November 2021

Departure of Judges and Nominees

CONTACT PERSON

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