



ISET 2024

The 11th International Conference for Science Educators and Teachers (ISET) 2024

“Science Education 2030 – Need for New Solutions in
a Rapidly Changing World: *Rethinking our Future Together.*”

June 13th – 14th, 2024
Udon Thani Rajabhat University, Thailand

Conference Agenda - Day 1 June 13th (Thursday), 2024	
08.30-09.00 A.M.	Registration
09.00-09.30 A.M.	Opening ceremony ISET 2024 <ul style="list-style-type: none"> • Welcome speech from <ul style="list-style-type: none"> - Assistant Professor Dr. Khanisara Thansunthornsakun The President of Udon Thani Rajabhat University Report addresses from <ul style="list-style-type: none"> - Associate Professor Dr. Pattawan Narjaikaew The Lecture of science Faculty of Education, Udon Thani Rajabhat University, The Chair of ISET 2024 • Opening remark from <ul style="list-style-type: none"> - Associate Professor Dr. Chokchai Yuenyong The President of Science Education Association (Thailand) • ISET 2024 Video presentation Conference Room: Thana Kron 2
09.30-09.40 A.M.	Break
09.40-10.40 A.M.	Topic: Research on Sustainable Education Keynote 1: Assistant Professor Dr. Dury Bayram Session Chair: Assistant Professor Dr. Nookorn Pathommapas Conference Room: Thana Kron 2
10.40-10.50 A.M.	Break
10.50-11.50 A.M.	Topic: Scientific Literacy While Promoting Innovative And Sustainable Educational Practices. Keynote 2: Professor Dr. Hadi Suwono Session Chair: Atichat Uppaphong, Lecturer That Phanom College, Nakhon Phanom University

Conference Agenda - Day 1
June 13th (Thursday), 2024

	Conference Room: Thana Kron 2
11.50 A.M.-01.00 P.M.	Lunch
01.10 – 02.00 P.M.	<p>Oral Presentation; Parallel Session I Conference Room 1: Thana Kron 2 Chair Team: Assistant Professor Dr. Chanyah Dahsah</p> <p>Conference Room 2: Passakron 1 Chair Team: Assistant Professor Dr. Chaninan Pruekpramool</p> <p>Conference Room 3: Passakron 2 Chair Team: Assistant Professor Dr. Panwilai Suandokmai</p> <p>Conference Room 4: Lounge 1 (Online) Chair Team: Assistant Professor Dr. Nookorn Pathommapas</p>
02.00 - 02.10 P.M.	Break
02.10 - 04.10 P.M.	<p>Oral Presentation; Parallel Session II Conference Room 1: Thana Kron 2 Chair Team: Assistant Professor Dr. Chanyah Dahsah</p> <p>Conference Room 2: Passakron 1 Chair Team: Assistant Professor Dr. Chaninan Pruekpramool</p> <p>Conference Room 3: Passakron 2 Chair Team: Assistant Professor Dr. Panwilai Suandokmai</p> <p>Conference Room 4: Lounge 1 (Online) Chair Team: Assistant Professor Dr. Nookorn Pathommapas</p>
05.10 – 06.00 P.M.	SEAT Committee Meeting Conference Room: Lounge 1
07.00- 09.00 P.M.	Welcome Party (Casual Smart Dressing) Room: Passakron

Conference Agenda- Day 2 June 14th (Friday), 2024	
08.30-09.00 A.M.	Registration
09.00-10.00 A.M.	<p>Topic: STEM education, particularly focusing on developing localized and contextualized learning materials to improve student understanding and critical thinking skills in science.</p> <p>Keynote 3: Professor Dr. Monera A. Salic-Hairulla</p> <p>Session Chair: Associate Professor Dr. Pattamaporn Pimthong Conference Room: Thana Kron 2</p>
10.00-10.10 A.M.	Break
10.00-10.10 A.M.	<p>Topic: PLC STEM academy for enhancing STEM teacher competencies.</p> <p>Keynote 4: Associate Professor Dr. Chokchai Yuenyong</p> <p>Session Chair: Assistant Professor Dr. Chanchira Choomponla</p> <p>Conference Room: Thana Kron 2</p>
10.10 A.M.- 12.10 P.M.	<p>Oral presentation; parallel session III</p> <p>Conference Room 1: Thana Kron 2 Chair Team: Atichat Uppaphong, Lecturer That Phanom College, Nakhon Phanom University</p> <p>Conference Room 2: Passakron 1 Chair Team: Dr. Jiraporn Tupsai</p> <p>Conference Room 3: Passakron 2 Chair Team: Assistant Professor Dr. Muneeroh Phadung</p> <p>Conference Room 4: Lounge 1 Chair Team: Pairoh Sohsomboon, Nakhon Phanom University</p>
12.10 – 01.00 P.M.	Lunch
01.00 - 02.00 P.M.	<p>Oral Presentation; Parallel Session IV</p> <p>Conference Room 1: Thana Kron 2 Chair Team: Assistant Professor Dr. Nookorn Pathommapas</p> <p>Conference Room 2: Passakron 1 Chair Team: Dr. Navara Seetee</p> <p>Conference Room 3: Passakron 2 Chair Team: Associate Professor Dr. Sasithev Pttiporntapin</p> <p>Conference Room 4: Lounge 1 Chair Team: Atichat Uppaphong, Lecturer That Phanom College, Nakhon Phanom University</p>
02.10 - 03.30 P.M.	Oral Presentation; Parallel Session V

Conference Agenda- Day 2
June 14th (Friday), 2024

	Conference Room 1: Thana Kron 2 Chair Team: Assistant Professor Dr. Nookorn Pathommapas Conference Room 2: Passakron 1 Chair Team: Dr. Navara Seetee Conference Room 3: Passakron 2 Chair Team: Associate Professor Dr. Sasithev Pttipornatapin Conference Room 4: Lounge 1 Chair Team: Assistant Professor Dr. Chanchira Choomponla
03.30 - 03.40 P.M.	Break
03.40 - 05.00 P.M.	Closing Ceremony: ISET 2024 <ul style="list-style-type: none">- Chasing the Stars: Outstanding Presentation Announcement- Pass the ISET Flag to the Next University for ISET 2025- Welcome Address from the Chair of ISET 2025- Closing remark by Associate Professor Dr.Chokchai Yuenyong, The President of Science Education Association (Thailand) Conference Room: Thana Kron 2

Oral Presentation; Parallel Session I**Conference Room 1: Thana Kron 2 / Chair Team: Assistant Professor Dr. Chanyah Dahsah**

Paper ID	Authors	Paper Title	Note
03	Ika Hasanah	Contextual Teaching Materials to Promote 21st-Century Skills: A Systematic Literature Review	
07	Lan Zhou , Gan Su , China	Research on data-driven virtual experimental framework	
13	Artnarong Manosuttirit	The Results of the Development of Learning Curriculum on Collection and Classification of Mollusk Specimens in the Eastern Region for Secondary School Students	
17	Maria Theresa G. Tadena	Exploring Teachers' Eco-Pedagogical Strategies Through Eco-Catalogue: A Multiple Case Study	
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Conference Room 2: Passakron 1 / Chair Team: Assistant Professor Dr. Chaninan Pruekpramool

Paper ID	Authors	Paper Title	Note
01	Shalom Grace S. Vega	Trends in Chemistry Education Research on Student Transformation in the Philippines: A Meta-analytic Review	
02	Abunda, Nancy D.	Tpack Of Mathematics Educators: Basis For The Development Of A Mathematics Module	
06	Kirana Phakum, Patcharee Rompayom Wichaidit	Exploring Students' Representational Competence of Chemical Bonding Concepts	
09	Manuel B. Barquilla	Teachers Schema in the Classroom and Students Consequential Production in the Topic Photosynthesis: The Case of Biology Teachers	
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Conference Room 3: Passakron 2 / Chair Team: Assistant Professor Dr. Panwilai Suandokmai			
Paper ID	Authors	Paper Title	Note
04	Rossy Andini Herindra Putri, Ari Widodo	What's Going On on Their Heads: A Case Study of Students' Minds On during STEM Exhibition	
05	Leo A. Mamolo	Effects of Digital Interactive Math Comics (DIMaC) to the Achievement, Motivation, Self-efficacy, and Anxiety of STEM students in General Mathematics	
10	Mark Ryan P. Villena and Manuel B. Barquilla	Enhancing The Stem Education Literacy Of Josefina District Teachers Through Learning Action Cell Session	
26	Mohamed M. Solaiman	Practices And Problems Of Teachers On The Implementation Of Stem Strand Of Senior High Schools	
Conference Room 4: Lounge 1 / Chair Team: Assistant Professor Dr. Nookorn Pathommapas			
Paper ID	Authors	Paper Title	Note
20	Asnaifah Saga and Amelia T. Buan	Contextualized Lessons: Effects On The Level Of Achievement Of Grade 8 Students In Probability	Online
27	Wichaya Maneechai	A Study Of The Components For Intolerance Of Uncertainty In Western Group Of Rajabhat University Students	Online
29	Sittie Anima Micawayan and Jocelyn Aman	Development And Validation Of Optics Module In The Post-Pandemic Era	Online
59	Solis, J.P., Luib, J.R.,* Malayao, S. Jr, Castro, E.J., and Confesor, R.F.	K to 12 STEM Competencies in Education 4.0	Online

Oral Presentation; Parallel Session II**Conference Room 1: Thana Kron 2 / Chair Team: Assistant Professor Dr. Chanyah Dahsah**

Paper ID	Authors	Paper Title	Note
18	Suchawadee Somsamran	Effects of Using the Learning Management Model to Promote Innovative Problem-Solving Ability in Science Student Teachers at Rajabhat University	
21	Tanyaratana Dumkua	Integrating Science Disciplines to Enhance Learning in Forensic Science Classes for High School Students	
23	Thawat Phumthananiwet, Suchawadee Somsamran and Pataraphan Promkhot	Development of Creative Thinking Skills of Senior Secondary Students using Design thinking in Science Education	
25	Nafisah Abdulrachman and Salamah Indad	Pre-Service and In-Service Science Teachers' Understanding on the Nature of Science in Selected Provinces of Bangsamoro Autonomous Region in Muslim Mindanao, Philippines	
28	Hanifah B. Lucman	Factors Influencing Science Teachers' Competence in Junior High Schools in Lanao Del Sur-1	
31	Hamima D. Mamacol	Assessing the Level of Disaster Awareness and Preparedness of Public High School Constituents in Lanao del Sur 1	
33	Nuchutha Thamsamet and Wanlop Kongna	Addressing Learning Outcomes in Instrumental Chemical Analysis for High School Students through Problem-Based	

Conference Room 2: Passakron 1 / Chair Team: Assistant Professor Dr. Chaninan Pruekpramool

Paper ID	Authors	Paper Title	Note
11	Desades, Christy M.	Development of self- learning modules in disaster Readiness and risk reduction for senior high school students	
12	Liza May Duran and Duran Douglas A. Salazar	Development Of Learner-Led Simulation-Based Activities Using Geogebra In Basic Calculus	
16	Mamdoh S. Laguindab	Interest And Performance of Grade 10 Students in Science Modular Learning	
19	Krittin Tipmontiane, Suchawadee Somsamran	The Development of 11th Grade Students' Science Communication Competency in the Topic of Cardiac Structure and Function Using Model-based Learning Integrating with Augmented Reality (AR)	
22	Charisse Mae C. Cambahe, and Douglas A. Salazar	Development And Validation Of Contextualized Interleaved Assessments In Probability For Grade 8 Learners	
24	Nakorn Junla	Exploring Project-Based Learning: A Case Study in Financial Mathematics Class Learning	
32	Jakkrapong Pinchai, Navara Seetee	The Effect of Model-based Inquiry with Scaffolding Techniques on Low-achieving Students' Construction of Scientific Explanations	
34	Narongsak Koonrugsa	Effectiveness and satisfaction of virtual lab activity with inquiry-based learning in the solid-state topics	

Conference Room 3: Passakron 2 / Chair Team: Assistant Professor Dr. Panwilai Suandokmai			
Paper ID	Authors	Paper Title	Note
44	Suwini Phonraksa	Enhancing Grade 10 Students' Written Communication Ability in Sciences on Work and Energy with Implementation of a Metacognitive Learning Approach	
45	Onnicha Wongnuanta and Pattawan Narjaikaew	Physics Problem Solving Ability of Grade 10 Students Learning Through Open Approach on Momentum and Collisions Onnicha Wongnuanta	
63	Liezel Visitacion Patadilla-Naquines and Monera Salic-Hairulla	Ethnobotanical Survey On The Herbal Plants Used By College Students: Basis For Stem Lesson	
64	Lea Salon and Monera Salic-Hairulla	Familiarity and Uses of Common Ethnobotanical Plants among Young Higaonon Students: Basis for a Contextualized STEM Lesson	
66	Lea Salon and Monera Salic-Hairulla	Students' Awareness and Practices on Solid Waste Management: Basis for a Contextualized STEM Lesson	
90	Pathompong Chummongkol, Jiraporn Tupsai, Chokchai Yuenyong	Creating Indigenous Knowledge Out-of-School STEAM Activities: Creativity of Making Lanna Lanterns	
92	Potsawee Nammungkhun, Chokchai Yuenyong	Fostering Social and Environmental Justice Through STEM Education	
103	Angkana Langkawong and Pattamaporn Pimthong	A Conceptual Framework for Promoting Pre-Service Teachers' Competencies in Culturally Responsive STEM teaching	

Conference Room 4: Lounge 1 / Chair Team: Assistant Professor Dr. Nookorn Pathommapas			
Paper ID	Authors	Paper Title	Note
82	Sofeeya Pohji and Muneeroh Phadung	The Development Of Unplugged Coding Activity Package Based On Gamification Concept With Inquiry-Based Learning To Enhance Computational Thinking Skills in Computing Science Course for Grade 5 Students.	Online
108	Pimpicha Sastrachai	Development of the Force and Motion STEM Education Unit with 7E for Enhancing Grade 8 Student's Creativity, Teamwork Skills, and Scientific Attitudes	Online
110	Wannapha Pattarat and Patcharee Rompayom Wichaidit	An Inquiry Instruction To Incorporate Augmented Reality For Promoting Biology Concepts Of Upper Secondary Students	Online
118	Mohaisah P. Boloto and Edna B. Nabua	Small-Scale Chemistry (SSC): Its Effect on the Grade 11 STEM Student' s Conceptual Understanding of Acid and Base	Online
119	Joy R Delos Reyes, Maria Lourdes dM Galia	Development and validation of optics module in the post-pandemic era	Online
125	Musliha M. Salic, Ellen J. Castro, Sotero O. Malayao Jr, Jun Karren V. Caparoso, Monera A. Salic-Hairulla, Joy R. Magsayo	Development of Bite-Size Videos in Teaching Earthquakes Among Grade 6 Learners	Online
126	Tyrone Tarranza	Learning through Open-Ended Mathematical Tasks: A Proposed Framework	Online

Oral Presentation; Parallel Session III

Conference Room 1: Thana Kron 2 / Chair Team: Atichat Uppaphong, Lecturer That Phanom College, Nakhon Phanom University

Paper ID	Authors	Paper Title	Note
97	Kanisorn Tonseenon and Chokchai Yuenyong	Status Quo of Enhancing Pre-Service Science Teachers' STEM Education Teaching in the Udon Thani Rajabhat University School Internship Program	
109	Sasithev Pitipornatapin, Oraphan Butkatanyoo, Chatsiri Piyapimonsit, Thananun Thanarachataphoom, Usanee Lalitpasan, Sareeya Chotitham and Wendy S. Nielsen.	Using a Professional Development Model Focusing on Outdoor STEM Learning Resources for Enhancing In-service Teachers' STEM Literacy in Australia	
112	Patthaphong Thiamtri and Chokchai Yuenyong	Student' Barriers of Designing the LED Sign and Décor in STEM Education	
117	Chanita Butrattana, Jiraporn Tupsai, Chokchai Yuenyong	Guideline of Practicing for Computational Thinking skill in Battery Education	
120	Diosyjeanne Simyunn, Monera Salic-Hairulla, Angeline Dinoro, Douglas Salzar, Muhmin Michael Manting	Learning Material Based on 7E Model in Teaching Systematics for Grade 12 STEM Learners	
121	Thanakrit Gasa-art, Pratchayapong Yasri, and Prempreee Duangpummet	Integrating Design Thinking into STEAM-BCG Education: Practical Lesson Plans to Enhance Problem-Solving Skills in Middle School Classrooms	
124	Piyatida Supa and Chanyah Dahsah	Promoting High School Students' Problem-Solving Competencies using STEM Climate Change Activities	
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Conference Room 2: Passakron 1 / Chair Team: Dr. Jiraporn Tupsai

Paper ID	Authors	Paper Title	Note
127	Akkarawat Srisawat and Chokchai Yuenyong	Framework for Assessment of Students' Resilience and Adaptive Capacity in the KKU EV Bus STEM education Unit	
128	Burhanuddin Halimi	Teaching Thermodynamics Principle of Power Generation with Analogy for Electrical Power Engineering Students to Enhance Their Understanding	
40	Supanan Sucharit	How Antimicrobial Resistance Class Inspire Research Projects in High School Students	
42	Lai Jinmei and Chanyah Dahsah	Exploring university students' difficulties in reading scientific texts: A systematic review	
48	Renevine C. Habagat	Factors Affecting Sensemaking Moments In The Classroom	
53	Arunee Eambaipreuk, Somsak Techakosit	How Does the Tutorial Work for Learning Galaxies in an Online Classroom?	
55	Kannika Wisoongle, and Chaninan Pruekpramool,	Investigating Design thinking abilities of Thai students at the vocational certificate level	

Conference Room 3: Passakron 2 / Chair Team: Assistant Professor Dr. Muneeroh Phadung

Paper ID	Authors	Paper Title	Note
56	Phakhaporn Suwannahong, Pinit Khumwong, and Navara Seetee	High School Students' Scientific Explanation on Circulatory System: A Survey of Ability and Writing Style	
67	Shylza Tiplan and Edna Nabua	Enhancing Conceptual Understanding in Life Science through a Workbook	
68	Regine Rose Omictin and Edna Nabua	An SSI-Based Module for the Least-mastered Competency in General Biology	
69	Jeanalyn Celis and Edna Nabua	A Laboratory Supplemental Material in General Biology: An Assessment-Based Intervention	
71	Almira Faye Guiritan, Edna Nabua and Roger Vincent Nabua	Assessment-Based Sequenced Learning Material for the Junior High School Biology	
76	Apichaya Jongjaijit	Using Socioscientific Issue -Based Learning to Promote Scientific Reasoning Competency on Biotechnology of 1st Year Vocational Certificate Students	

Conference Room 4: Lounge 1 / Chair Team: Pairoh Sohsomboon, Nakhon Phanom University			
Paper ID	Authors	Paper Title	Note
79	Manthana Chaengkrachang, and Chaninan Pruekpramool	Measuring Scientific Creativity: A Test Designed for Thai Lower Primary School Students	
83	Yangmei Zhong and Chanyah Dahsah	Science Teachers' Perspectives on Situation-Based Learning: A Case of Primary Schools in China	
88	Raymond Tsoi	Blended Thinking Intelligence to enhance Skilful Thinking Purposefully	
89	Thanyanan Somnam	Enhancing High School Students' Comprehension of Electromagnetic Wave Properties: A Competency-Based Approach Aligned with PISA Standards	
91	Siriwan Srisajjalertwaja	A Comparison of Grade 10 students' Achievement in the Topic of Fossil Fuels between the using Science Activities Series and Traditional Learning	
93	Witsanu Suttiwan, Chokchai Yuenyong	Science Teachers' Competency for Organizing Transformative Learning and Sustainable Development in School Setting	
98	Phatsaraporn Sahakit and Chokchai Yuenyong	Developing Open-Ended Questionnaire for Examining Teachers' Knowledge of Assessing Students' Competency in Science Learning	

Oral Presentation; Parallel Session IV**Conference Room 1: Thana Kron 2 / Chair Team: Assistant Professor Dr. Nookorn Pathommapas**

Paper ID	Authors	Paper Title	Note
30	Annabeth Aque and Edna Nabua	Perceptions on generative AI in education: BASIS for pedagogical and ethical deliberations	
114	Chumphonphat Chaiyasat and Chokchai Yuenyong	Developing a Survey of Examining In-service Science Teachers' Technological Pedagogical and Content Knowledge (TPACK)	
123	Rames Kaewmanee, Chanyah Dahsah, Navara Seetee	A Systematic Review of Teaching Strategies to Enhance Students' Conceptual Understanding of Electrochemistry	
35	Nailah c. Said	Effects Of Mind Mapping - Oriented Modular Instruction On Students' Conceptual Understanding And Problem Solving Skills In Geometry	
36	Aidah u. Langilao	Problems Encountered By Science Teachers And Students On The Use Of Two-Way Radio In Blended Learning (Twribl) In Butig, Lanao Del Sur	
37	Sirihathai Srikwanjai and Sorachai Sae-Lim	Student Autonomy in Active Learning Activities in Advanced Organic Chemistry	

Conference Room 2: Passakron 1 / Chair Team: Dr. Navara Seetee

Paper ID	Authors	Paper Title	Note
38	Arman Araya, Manuel Barquilla, Everlita Canalita, Joy Bagaloyos, Sasithip Pitiporntapin	Development And Validation Of An Ssi-Based Module In Promoting Decision-Making Skills of Stem Strand Learners	
39	Pimphen Tainsittipong	The Study of Project - Based Learning Towards the Plant Development of Grade 10 Students at Mahidol Wittayanusorn School	
41	Pattaraya Klintong	Project-Based Learning to Develop Science Process Skills of Matthayomsuksa 4 Students in Mushroom Production Course	
43	Laokhwan Ngamprasit	Developing Essential Future Skills in an Internet of Things Course Through Project-Based Learning	
46	Pasthanunya Kaewmee and Pattawan Narjaikaew	The Effect of TSOI Learning Cycle Model on Grade 7 students' Competency of Make and Justify Appropriate Scientific Predictions and Solutions on Weather Systems	
47	Sittirach Pimput ana Pattawan Narjaikaew	Enhancing Grade 11 Students' Multiple Representation on Static Electricity Using Context-Based Learning Supplemented With Phet Interactive Simulations	

Conference Room 3: Passakron 2 / Chair Team: Associate Professor Dr. Sasithev Pttiporntapin			
Paper ID	Authors	Paper Title	Note
51	Tipanart Noikaew and Patsavipich Rungrojtrakool	Enhancing Sustainability Awareness Through Ecotourism: A Minicourse Option	
50	O-Phart Phrathep	Exploring High School Biology Students' Initial Mental Models about Mutation	
52	Elesar V. Malicoban MScied, Joy R. Magsayo MScied, Christine Mae B. Tecson MScied, Rhea Rachel T. Cañoneo, Kyla Jane S. Gales, Jonaisah D. H.Cosain	Teaching Planets Through Space Jump Adventure Game	
54	Azriel P. Barrientos, Monera A. Salic-Hairulla, Sotero O. Malayao Jr., Saddam C. Bazer, Joy P. Bagaloyos	Development And Evaluation Of Digital Interactive Mendelian Genetics Comic Stories (Dimengecoms) For Enhancing Conceptual Understanding Of High School Students	
57	Jiezel G. Aquino	Collective Sensemaking Across Different Group Compositions Of Grade 7 Students	
60	Boonliang Chordnork	The Development of Science Activity Package base on the Model-Based Learning to Develop Grade 12 Students' Scientific Explanation Competency and Scientific Modeling on Celestial Sphere at Udon Pittayanukoon School	

Conference Room 4: Lounge 1 / Chair Team: Atichat Uppaphong, Lecturer That Phanom College, Nakhon Phanom University

Paper ID	Authors	Paper Title	Note
61	Pranida Phujom and Sara Samiphak	Development Of Board Games That Improve Critical Thinking Ability Of Upper Elementary Students	
62	Michelle T. Clavido, Jun Karren V. Caparoso, Rhea F. Confesor, Joy R. Magsayo, and Monera A. Salic- Hairulla	Exploring Students' Science Procedural Knowledge In Earth Science	
65	Edna Nabua and Laura Francisco	A Contextualized Module for Non-Mendelian Pattern	
70	Jenny Allonar and Edna Nabua	Needs-Based Intervention Material on Protein Synthesis for Grade 10 Students	
72	Krittisak Lakkam and Chanchira Choomponla	The Development Scientific Explanation Ability by Using Phenomenon Based Learning Approach on Ecosystem and Biodiversity of Grade 9 Students	
73	Thitima Thienthaisong	The ED3U Learning Supplemented with Science Toys about Sounds in Everyday Life to Encourage Grade 5 Students' Scientific Explanation Ability	
74	Pimtananya Pobsamai	Promoting the Modelling Ability of Weather Phenomena of Grade 7 Students through Model-based Learning	

Oral Presentation; Parallel Session V**Conference Room 1: Thana Kron 2 / Chair Team: Assistant Professor Dr. Nookorn Pathommapas**

Paper ID	Authors	Paper Title	Note
75	Sirikan Putchaiwit	Modelling Ability of Grade 9 Students by Learning Activity Based on the Solar System's Interactions	
77	Thammanoon Sanguannam	Promoting Conceptual Understanding of Evolution among Grade 10 Students through STS Learning Management	
78	Suhaimee Samae, Wiraporn Maithong, Ruhaisa Dearamae	The Development of Astronomy Learning Activities with Augmented Reality Technology on Celestial Sphere Topic using Inquiry-Based Learning (5E) to Enhance Analytical Thinking Skills of Grade 10 Students	
80	Analie P. Bracero	Development Of Webquest On Cell Cycle For Grade 8 Learners	
81	Saisuda Ruangcha and Chaninan Pruekpramool	Using Daily Life Scenarios to Create a Problem-Solving Skills Test for Thai 7th Grade Students	
84	Watana Saising	A Comparison of Grade 10 Students' Scientific Explanation Competency between Model – Centered Instruction Sequence (MIS) and Traditional Learning	

Conference Room 2: Passakron 1 / Chair Team: Dr. Navara Seetee			
Paper ID	Authors	Paper Title	Note
85	Sulada Srichiangsa	Context-based Learning for Enhancing Conceptual Understanding on Ecosystem of Grade 9 Students	
86	Kornwipa Teerasri	Enhancing Scientific Explanation Ability of Grade 10th Students by Using Socio-scientific Inquiry-Based Learning Approach on Gene and Chromosome	
87	Pannipha Kongkaew	Conceptual Understanding on Human Reproductive System of Grade 8 Students Learning through ED ³ U Model	
94	Nimce Mae Gervacio and Monera A. Salic-Hairulla	Strategies and Challenges in Teaching and Learning Biotechnology for a Junior High School: A Case Study	
95	Nimce Mae Gervacio, Hanah Marie G. Eviota, and Monera	A. Salic-Hairulla Development of Interactive Presentation on Non-Mendelian Inheritance for Grade 9 Learners	
102	Thusshawoot Kongprakhon and Pattamaporn Pimthong	The Development of a Conceptual Framework for Designing Professional Development Programs for enhancing STEM Teachers' Competencies in Assessment	

Conference Room 3: Passakron 2 / Chair Team: Associate Professor Dr. Sasithev Pttiporntapin			
Paper ID	Authors	Paper Title	Note
96	Vicente G. Celis, Jr, Cornelio G. Duaso , Jeanalyn A. Celis ,Edna B. Nabua	Effects of Covid-19 Pandemic on the Academic Stress and the Coping Mechanism of Mechanical Engineering Students: Basis for Action Plan	
99	Azriel Barrientos, Monera Salic-Hairulla, Sotero Malayao, Saddam Bazer, and Joy Bagaloyos	Development and Evaluation of Digital Interactive Mendelian Genetics Comic Stories (DIMenGeComS) for Enhancing Conceptual Understanding of High School Students	
100	Pattamaporn Pimthong	Promoting Science Teachers' Noticing During The Field Experiences	
101	Lou Emmanuel S. Rabago and Monera Salic-Hairulla	Digital Pedagogy in Biology: A WebQuest Approach to Teaching the Cell Cycle to Grade 8 Students	
104	Michael Jan Alima, Manuel Barquilla, Joy Bagaloyos, Carlo Stephen Moneva, and Joan Rose Luib	Development of Design Thinking-Based Lesson on Schistosomiasis for Senior High School Learners	
105	Thanawat Ngaoda, Sasithev Pitiporntapin and Pongprapan Pongsophon Enhancing	Competencies in the BANI World: Investigating Best Practices for Designing Science Lesson Plans Using Active Learning Approaches	

Conference Room 4: Lounge 1 / Chair Team: Assistant Professor Dr. Chanchira Choomponla

Paper ID	Authors	Paper Title	Note
106	Kun Deng and Chanyah Dahsah	Assessing Computational Thinking of Computer Students at Higher Vocational College in Yunnan, China	
111	Raihanna H. Mangurun and Jocelyn P. Aman	Effects of Video Lessons-Assisted Modular Instruction on Students' Conceptual Understanding and Interest in STEM subject	
113	Sittie Nadja Domato	Development of Contextualized Learning Activity Packets in Biodiversity for Grade 10 Learners	
115	Sitti Marriam Mawal	Development of 7E Guided-Inquiry Learning Tasks on One-dimensional Motion	
122	Zyrah Mae Marchan	Integrative Assessment in Elementary Science and Mathematics Classes: A Case Study	