









PROGRAM BOOK



THE 9^{TH}

SOUTH EAST ASIA - DESIGN RESEARCH

INTERNATIONAL CONFERENCE

SEA-DR 2 0 2 3

PALEMBANG, 19-20 MAY 2023

"DESIGN RESEARCH FOR ALL"

Doctoral Program on Mathematics Education Faculty of Teacher Training and Education Sriwijaya university



THE 9th SEA-DR IC 2023

Program and Abstract May 19th - 20th, 2023





























Preface

The 9th South-East Asia Design Research Interantional Connference (The 9th SEA-DR IC 2023) will be held on May 19th - 20th, 2023 in Palembang, South Sumatera, Indonesia. Palembang is the oldest city in Indonesia and is located on the island of Sumatra. Thiscity is at least 1337 years old based on the Kedukan Bukit inscription. In the past, Palembang was the capital of the Empire of Sriwijaya and one of Asia's main learning centers. Continuing the legacy of the Empire's spirit of learning, this conference will again be the gathering place for academics and professionals in education and relatedfields from around the world. The goal is to share new ideas and innovations along with the development of science and technology.

The main goal of the 9th SEA-DR IC 2023 is to provide an opportunity for academicians and professionals from various education-related fields all over the world to come together and learn from each other. Furthermore, the other goal is to provide a place for academicians and professionals with disciplinary interests related to education to meet and interact with members inside and outside their disciplines.

Conference Topics

The 9th SEA-DR IC 2023 will bring together researchers, educators, students, and practitioners in the areas of Sciences, Applications and Technologies in Education from around the world. Topics of interest for submission include, but are not limited to the following tracks:

- 1. English language and literature education
- 2. History education
- 3. Early age education
- 4. Elementary school education
- 5. Mathematics and mathematics education
- 6. Biology and biology education



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Welcome Remarks

The Rector of Sriwijaya University



Distinguished Dean of FKIP Sriwijaya University Distinguished Keynote Speakers Respected Guests Dear participants, ladies, and gentlemen

I am proud to extend my warm welcome to all of you at this The 9th SEA-DR IC 2023 FKIP Sriwijaya University, an international conference on "Design research for all". Iwould also like to thank the Dean of FKIP Sriwijaya University and the organizing committee for their shared interest and objective in improving education quality to strengthen global competitiveness. Thank you to the presenters for your valuable contributions to this conference. Education would be the fastest-growing public sector. This sector is viewed as the critical empowering factor so that we can achieve the purposes of our country, as stated in the Preamble of the Constitution 1945. We see education as the primary instrument for improving the quality of life and fostering equal opportunities to enhance global competitiveness. Education is committed to contributing positively to our community, society, and country. Education will no longer be used as a tool to maintain privilege, injustice, and division.

The quality of education is crucial. To improve the quality of education, attention from academicians and professionals from various fields related to education is required. To succeed at facing and enhancing global competition in this age, ideas and inventions delivered professionally are also needed. I believe and feel assured that this conference will promote debates with participants within and beyond their particular disciplines. I also believe that we will invest and accomplish the objective by having ample knowledge and creating resources for all by recognizing all potential.

Distinguished guests, ladies, and gentlemen,

Finally, I wish you all success during this international conference and hope you all have a nice and enjoyable time. By saying bismillah, i officially open this general lecture with theme " Design research for all".

Prof. Dr. Ir. H. Anis Saggaff, MSCE., IPU., ASEAN. Eng

Rector





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Remarks from

The Dean of The Faculty

The Honorable Rector of Sriwijaya University, Prof. Dr. Ir. H. Anis Saggaff, MSCE., IPU., ASEAN. Eng The Honorable Keynote Speakers

Respected Guest

The Honorable All Speakers, Presenters, and Invited ParticipantsLadies and gentlemen,

This morning, I am very delighted to welcome you to the 9th SEA-DR IC at Sriwijaya University in 2023.

This international conference aims to provide opportunities for academics and professionals from various fields related to education to discuss current issues in education, especially related to thetheme of our activity today, "Design research for all".

I believe what all speakers will convey at this international conference will be very important toimprove the quality of education in era 4.0.

At this happy moment, I would like to thank all the keynote speakers:

Assoc. Prof. Dr. Maarten Dolk (Utrecht University, Netherland)

Asst. Prof. Dr. Choy Ban Heng (National Institute of Education, Singapore)

Assoc. Prof.Dr. Masitah Shahrill (Universiti Brunei Darussalam, Brunei Darussalam)

Assoc. Prof. Dr. Arthur Bakker (Utrecht University, Netherland)

Assoc. Prof. Hartono, M.A (Universitas Sriwijaya, Indonesia)

Prof. Dr. Zulkardi, M.I.Komp., M.Sc (Universitas Sriwijaya, Indonesia)

I would also like to thank all the invited speakers:

Prof. Ratu Ilma Indra Putri, M.Si (Universitas Sriwijaya, Indonesia)

Prof. Dr. Zaleha Ismail (University Technology Malasysia, Malaysia)

Prof. Dr. Rully Charitas I.P., S.Si, M.Pd (Universitas Ahmad Dahlan, Indonesia)

Prof. Rooselyna E., Ph.D (Universitas Negeri Surabaya, Indonesia)

Shintia Revina, Ph.D (Eindhoven University of Technology, Netherland)

Assoc. Prof. Dr. Rita Inderawati, M.Pd (Universitas Sriwijaya, Indonesia)

Assoc. Prof. Dr. Zahra Alwi, M.Pd (Universitas Sriwijaya, Indonesia)

Bustang, Ph.D (Universitas Negeri Makassar, Indonesia)

































Dr. Meryansumayeka, M.Sc (Universitas Sriwijaya, Indonesia)

Dr. Meilinda (Universitas Sriwijaya, Indonesia)

Dr. Syarifuddin, M.Pd (Universitas Sriwijaya, Indonesia)

And I, of course, thank all the presenters and participants who will contribute and share ideas at this international conference.

As the Dean, I sincerely thank all the committee members of this international conference who have worked hard and made this international conference as we are now.

Finally, I would also like to express my deepest gratitude to the Rector of Sriwijaya University, Prof. Dr. Ir. H. Anis Saggaff, MSCE., ASEAN. Eng who has helped us to make this international conference as wehave scheduled. On this opportunity, I also request Mr. Rector to welcome all keynote speakers, invited speakers, presenters, and participants of this international conference and open this The 9th SEA-DR IC 2023 officially.

Ladies and gentlemen,

Now, this The 9th SEA-DR IC 2023 is your international conference. I hope everyone will find this international conference encouraging and fruitful.

Thank you very much

Assoc. Prof. Hartono, M.A Dean of FKIP Unsri































Report from Chairman of The Committee



Assalamu'alaykum Warohmatullahi Wabarokatuh

Welcome to The 9th SEA-DR IC 2023

The excellency Rektor of Universitas Sriwijaya, Dean and vice dean of Faculty of Teacher Training and Education Universitas Sriwijaya

The honorable Keynote speakers are Netherlands, Australia, Malaysia, Singapore, Brunei Darussalam, and Indonesia. Also, all invited speakers are from the Netherlands, Malaysia, and Indonesia, presenters, and all participants.

Alhamdulillah, thanks to Allah SWT, because today, May 19, 2023, we can do The 9th SEA-DR IC 2023 Universitas Sriwijaya, Palembang, Indonesia, in a virtual conference with the theme of Design research for all.

With this theme, we are redesigning learning for all students in the post-pandemic period. They can overcome learning loss during the pandemic. It is hoped that it can become a forum for scientific meetings between experts, lecturers, teachers, and students through the exchange of information, knowledge, experience, and view for improving the quality of learning and research in the world, especially in Indonesia.

The 9th SEA-DR IC was attended by the Rektor of Universitas Sriwijaya, keynote speakers, invited speakers, and paper presenters. There are 129 papers submitted for presentation and 498 participants. Finally, we would like to thank all the committees who have tried their best to organize this event. Thank you to the leaders and staff at Universitas Sriwijaya and the speakers and participants.

Wassalamu'alaykum Warohmatullahi Wabarokatuh







































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About Keynote Speakers



Assoc. Prof. Dr. Maarten Dolk Utrecht University, Netherland

Assoc. Prof. Dr. Maarten Dolk is involved in the development and research of in-service materials and interactive support systems for (student) teachers. His research interest also focuses on teacher knowledge and behavior in teaching situations. Presently, he is involved in mathematics education projects in Asia (specifically in Indonesia). Maarten is a coauthor of the first three books in the Young Mathematicians at Work series.





























Asst. Prof. Dr. Choy Ban Heng Assistant Professor, National Institute of Education -Mathematics & Mathematics Education

Dr. Choy Ban Heng is an Assistant Professor in Mathematics Education at the National Institute of Education, Nanyang Technological University, Singapore. As a recipient of the NIE Overseas Graduate Scholarship, Dr. Choy received his PhD from the University of Auckland, New Zealand, in 2015. He is currently one of the co-Heads for meriSTEM@NIE, a Multi-centric Education, Research, and Industry STEM centre in NIE. As a mathematics educator, Dr. Choy's research focuses on developing mathematics teachers' expertise in noticing critical mathematical and instructional details during the planning, enactment, and review of lessons. Dr. Choy was awarded the Early Career Award during the 2013 MERGA Conference in Melbourne for his excellence in writing and presenting a piece of mathematics education research on teacher noticing. He was also one of the guest editors for a ZDM Mathematics Education special issue on teacher noticing and had collaborated with international researchers in leading discussion groups on teacher noticing and professional development as well as in joint publications in journals, book chapters, and conference papers. More recently, he is involved in STEM education research and serves as an Associate Editor of a new STEM education journal published by Brill. Besides being the principal and co-principal investigators of several research projects, Dr. Choy serves as a consultant for schools both locally and internationally to improve the teaching and learning of mathematics.



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Asc. Prof. Dr. Masitah Shahrill

Sultan Hassanal Bolkiah Institute of Education, Universiti Brunei Darussalam, Brunei Darussalam

Dr Masitah Shahrill is an Associate Professor and Teacher Educator at the Sultan Hassanal Bolkiah Institute of Education (SHBIE), Universiti Brunei Darussalam (UBD). She was appointed lecturer at the university in August 2001 and went on to pursue her graduate studies in mathematics education at the University of Melbourne, Melbourne, Australia. Upon her return, Dr Masitah held several administrative appointments, including as the Academic Group Convenor for Mathematics Education, Programme Leader for Initial Teacher Preparation, Deputy Dean (Academic) and Dean of Sultan Hassanal Bolkiah Institute of Education (SHBIE), as well as the Director of Studies, and the Head of Teaching and Learning Centre for the Office of Assistant Vice-Chancellor (Academic Affairs), UBD. Dr Masitah was promoted as Senior Lecturer in August 2013, successfully migrated as a Senior Assistant Professor in October 2017, and effective from June 2021 promoted as Associate Professor.

Dr Masitah is passionate about raising the quality of teaching and learning of students and their development in the schools and in the higher education settings. She has supervised and is currently supervising several graduate students of SHBIE, and collaborated with almost all for international journal publications and presentations at international conferences. Dr Masitah's research interests lies in the teacher and teacher education, mathematics education, higher education, 21st Century teaching and learning, school-based assessment, classroom research, and youth practices and their education.































Assoc. Prof. Dr. Arthur Bakker

Utrecht University, Netherland

Assoc. Prof. Dr. Arthur Bakker (born January 3, 1970) is a Dutch mathematics education researcher and associate professor at the Freudenthal Institute, Utrecht University, Netherlands. He is Fellow at the University of Bremen. He is editor-in-chief of Educational Studies in Mathematics.Before, he was associate editor of Educational Studies in Mathematics since 2014. His main area of expertise is mathematics education, but he has contributed also to a more general boundary-crossing framework, and to the development of design research in education as a methodological approach to improve education and education as a design science more generally. Other areas of interest include interest development, attitudes toward science and mathematics, inferentialism, scaffolding, and embodied design. Bakker is project leader of The Digital Turn in Epistemology project funded by NWO. In 2004, Bakker graduated (PhD) on his dissertation titled Design research in statistics education: On symbolizing and computer tools, one of the first dissertations on design research (supervised by Koeno Gravemeijer, Gellof Kanselaar, and Jan de Lange). Alongside this project, he participated as advisor and curriculum author in the TinkerPlots project (NSF, ESI-9818946), directed by Cliff Konold (Umass, Amherst). At the Institute of Education (now UCL), he was research officer with Phillip Kent, in the TLRP project Technomathematical Literacies in the workplace, codirected by Celia Hoyles and Richard Noss (2004–2007).







































Asc. Prof. Dr. Hartono, M.A

Dean Faculty of Teacher Training and Education Sriwijaya University, Indonesia

Asc. Prof. Dr. Hartono, M.A is presently a Assc. Professor in Mathematics and Science Education Department, Faculty of Teacher Training of Sriwijaya University. Dr. Hartono, M.A. has heldvarious positions in Sriwijaya University from head of Unit, the department, vise Dean, and Dean. He is also a researcher in Teaching and Learning. Some of his recent engagements in research are: PISA (collaborative research with Utah State University, USA) and Teaching and Learning in 21th of century (collaborative research with Omdurman Islamic University, Sudan).



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Prof. Dr. H. Zulkardi, MI Komp, M.Sc. Sriwijaya University, Indonesia

Prof. Dr. H. Zulkardi, M.I.Kom., M.Sc. ia a Professor of Mathematics at Sriwijaya University. He also acts as the initiator of PMRI in Indonesia. In 1984 he completed his undergraduate education and received a degree in Mathematics Education. In 1990 he continued his master's education majoring in Computer Science, and earned an M.I.Kom degree at the University of Indonesia and the University of Mayland, USA. He also pursued a master's degree at the Faculty of Education Technology (ICT in Mathematics Education) at the University of Twente, Netherlands, and completed it in 1999. In 2002, he completed his doctoral education in Mathematics Education Program Study at the University of Twente and the Freudenthal Institute University of Utrecht, Netherlands. He is actively conducting scientific research and later published in various journals. He focuses on research in mathematics education, curriculum development, PISA-like task design, design research, and others. Some of his works that have been published successfully include "PISA Questions on Financial Literacy," "Mathematical Modeling Learning Design with PISA Framework on Grade X Function," and "The Development of PISA Questions and Activities Using Social Distancing Context during

Pandemic."





























About Invited Speakers



Prof. Ratu Ilma Indra Putri, M.Si

Universitas Sriwijaya, Indonesia

Prof. Ratu Ilma Indra Putri, M.Si, born in Palembang, South Sumatra, August 14 1969. In 1991 she completed her education in the S1 Program Study Program P. Mathematics at FKIP Sriwijaya University. In 1999 he completed his studies at the Masters Program in IPB in the Statistics Study Program. In 2010 completed the Doctoral Program at Jakarta State University, Education Research and Evaluation Study Program (PEP). Since becoming a lecturer, he has always carried out the Tridarma of Higher Education, especially in the fields of Indonesian Realistic Mathematics Education (PMRI), Design Research, Lesson Study, and PISA as well as local culture. In 2014, he succeeded in achieving the position of Professor, and has won several Dikti research grants starting from Young Lecturer Grants, Competitive Grants, National Strategic Grants, and Postgraduate Grants and Competitive Grants which explore the value of local wisdom in mathematics as well as about PISA and questions about HOTs. He has also been sent by the government abroad several times to take part in programs such as the Postdoctoral Program at Utrecht University in the Netherlands, the Europian School Session in Design Research at Jaen University in Spain and the ToT Lesson Study for Learning Community (LSLC) in Tokyo, Japan. Currently he is the Coordinator of the Center for Writing and Publication Management at Sriwijaya University. Apart from that, she is also active in organizations, both in the Mathematical Association and in women's organizations.









































Prof. Dr. Zaleha binti Ismail University Technology Malasysia, Malaysia

Zaleha Ismail is currently a professor at the School of Education, Faculty of Social Science and Universiti Teknologi Malaysia. Being a PhD graduate from Universiti Teknologi Malaysia, she has served the institution for 39 years after being awarded master in teacher education from Eastern Michigan University. She completed her bachelor degree in mathematics at Macalester College, USA. Her research interests include teaching and learning of mathematics, mathematical thinking, statistical thinking, mathematics teacher education, computer-supported collaborative learning, integrated STEM, SDGs and engineering education. She has worked as a researcher, primary and secondary teacher educator, supervisor of graduate research and as a consultant to the Malaysian Ministry of Education for the STEM education and HOTS (high order thinking skills) projects. She has been project leaders for various grants at university, national and international level. Over the years she has been appointed reviewers for journals and conferences as well as member of the editorial board for international journals in the area of mathematics education. Her research collaborators involve both local and international scholars from the Western and Eastern World. Presently, she is the vice president for Association of Johor Mathematics and Science Education.































Prof. Dr. Rully Charitas I.P., S.Si, M.Pd

Universitas Ahmad Dahlan, Indonesia

Prof. Dr. Rully Charitas I.P., S.Si, M.Pd was born in the city of Medan, on January 24, 1987. He completed his elementary-high school studies in his hometown, Medan. After graduating from high school, he continued his undergraduate studies in Mathematics at Gadjah Mada University and graduated with honors on July 31, 2008, Masters Bilingual Master Program on Mathematics Education (BiMPoME), a collaboration between the Higher Education, Sriwijaya University, and Utrecht University, which was completed within took 1.5 years and graduated Summa Cum Laude on February 18 2012, and Doctoral Degree in Mathematics Education at the Indonesian University of Education using the BPP-DN scholarship, which was able to be completed in less than 3 years, to be precise on August 12 2016, and being the first graduate of his class. Currently, he is listed as a Lecturer and Researcher in the Mathematics Education Masters Study Program, Ahmad Dahlan University, Yogyakarta and Deputy Head of Scientific Publications at the Indonesia Mathematics Educators Society (I-MES).



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Prof. Rooselyna E., Ph.D Universitas Negeri Surabaya, Indonesia

Prof. Rooselyna E., Ph.D born in Surabaya on 15-10-1982 is a lecturer at Surabaya State University. In the last 1 year, taught 16 courses. Has done 8 services. Has published 99 Scientific Articles in journals. Has been a speaker at 14 scientific seminars.































Shintia Revina, Ph.D Eindhoven University of Technology, Netherland

Shintia Revina, Ph.D holds a PhD in mathematics education from Faculty of Education – the University of Hong Kong, a master's degree in mathematics education from Freudenthal Institute – Utrecht University and Sriwijaya University, and an undergraduate degree in mathematics education from State University of Jakarta. Her research focuses on teaching and learning mathematics, teacher education and professional development, and socio-cultural dimension of mathematics education. At EsoE, she is currently working on two research studies, Multilingual Mathematics Learning & the Hybrid Professional Learning Community in Pre-service Teacher Education.





































Assoc. Prof. Dr. Rita Inderawati, M.Pd

Universitas Sriwijaya, Indonesia

Dr. Rita Indrawati, M.Pd., a lecturer in English Education at both the Undergraduate and Master Program at FKIP Sriwijaya University, Indonesia is interested in teaching literature for characterbuilding, academic writing, literacy and developing teaching materials for her research. Presenting her works in various countries from 2010 to 2019 in Hong Kong, India, South Korea, Adelaide, Sydney, Cambodia, Thailand, Malaysia, Singapore, Rome and Florence in Italy, Germany, France, the United States. Three studies that have been carried out are InternationalCollaborative Research with: 1) QUT, in Brisbane, Australia 2015; 2) Deakin University in Melbourne, Australia 2017; 3) Flinders University, Adelaide, in Australia 2018 where she was the Principal Investigator on the team. In 2020, international collaborative research was again carried out with Utah State University, in Logan, United States of America until now. She became aresource person/keynote speaker for development research, writing lecturer proposals for lecturers at Sriwijaya University and other universities in South Sumatra, writing articles forlecturers, academic writing training for students, video maker training for students. Several academic journals in Indonesia employ her as a reviewer such as SiELE, EF, ECJ, and IJOLL.Occasionally review articles from journals abroad. She has written 24 books with colleagues and students, namely poetry books, reference books & reading materials such as: Siti Zubaidah Millenial Drama Performance in ELT (2021), Let Me Greet Him "Good Morning": Anthology of Poetry during Covid-19 (2020), Is it You Next to My Door? An anthology of poetry in the Covid-19 outbreak period (2020), Literary Pedagogy in the Latest Literary Theory: Concepts and Applications (2020), Narrative Texts Based on Siti Zubaidah's Lyrics (2019), Spices Literature Books (2021), Now It is the Time to Act on Climate Change (2022), Untold Stories based Narrative Texts (2021), Anthology of Poetry Luka Mannakara (2022), three Palembang local drama script books and eight videos of legendary drama performances from Palembang havebeen published. Since 2021, she has created virtual English drama performance through the course she teaches, namely Literature in English Language Teaching. A total of 7 drama videos are being prepared to obtain copyright before being released on the Youtube channel. She has18 Intellectual Property Right from the Ministry of Law and Human Rights. Her achievements include: Best Lecturer at Sriwijaya University 2010; Unsri's Best Education Researcher, 2011; Best Lecturer of Sriwijaya University in 2013, and National Best Researcher through IndonesianHigher Education Competency Research (Dikti), 2013. Positions that have been entrusted toher: Head of Language and Arts Department (2010-2015), Head of Language Masters StudyProgram (2015-2019). She is now the Head of the Indonesian Language Education Laboratory, Faculty of Teacher Training and Education, Sriwijaya University since 2021.































Assoc. Prof. Dr. Zahra Alwi, M.Pd

Universitas Sriwijaya, Indonesia

Zahra graduated her undergraduate study in 1987 from the Teacher Training and Education, Department of Indonesian Language and Literature Education, Sriwijaya University, South Sumatra, Indonesia. In 1995 she got her master degree in Language and Literature Education from the IKIP, Malang, Java, Indonesia. She got her doctoral degree in 2017 from IAIN (now become UIN) Raden Fatah, Palembang, South Sumatera, Indonesia.

She began her career as a lecturer of Indonesian Language in 1989 in Faculty of Teacher Training and Education. She was a secretary of Department of Indonesian Language and Literature Education from 2002 to 2006, and from 2006 to 2010 she was a head of Department of Indonesian Language and Literature Education. In 2013—2018 she was a secretary of Yayasan Srijaya Negara, Faculty of Teacher Training and Education, Sriwijaya University.

In addition to being a lecturer, she was involved in many activities such as coordinator of Assessment Team of PLPG District 104 Unsri 2009-2017, Tim revieuwer of teacher2 research in Palembang City from 2015—2019, Tim evalution of Students and teachers National Competition in South Sumatera 2016, 2017, 2018, 2019. As a reviewer team of the curriculum of study programs in the Sriwijaya University environment 2018, 2019, 2020. As a reviewer team of textbook grant in Sriwijaya University 2019, 2020. As a reviewer team for research grants and community service for lecturers in the Faculty of Teacher Training and Education, Sriwijaya University 2019, 2020, 2021.

Her scientific publication and paper seminar are

- 1. 2021, the book "Language and Literature Learning Strategy"; published by Surya Pustaka Ilmu,
- 2. 2020, the book "Indonesian Who's Afraid" for Lectures at MPK, as a member, is chaired by Suhardi. (268 p.); published by Penerbit NoerFikri, ISBN 978-602-447-619-9
- 3. 2020, the book "A Collection of Literacy Questions to Prepare for AKM" was issued from the Profession Grant, chaired by Prof. Zulkardi; published by UPT Penerbit dan Percetakan Unsri, dan Website: https://akmpisa2021indonesia.wordpress.com/
- 4. 2019, the book "Language Learning Planning Based on Character Education and Scientific Approach; published by Surya Pustaka Ilmu, Karanganayar Jateng. ISBN. 978-623-91205-4-2, Cet. II. 2019; already got HKI in 2019, number 000157638.
- 5. 2018, Module of Poetry learning based on local wisdom for class IX Madrasah Tsanawiyah in Palembang; published by UPT Percetakan Sriwijaya University, ISBN 979-587-690-2; already got HKI, number EC00201823899, 000114308.













- 6. 2020, Speaker of the ICELS-2nd International Conference, 15-16 September 2020. The topic is "Perception and Need Analysis of Development Literation Reasoning Question Based on Minimum Competence Assessment", certificate of evidence,
- 7. 2019, PGSD National Seminar Speaker, the topic is "Development of Character Education Based Teaching Materials".
- 8. 2019, international seminar & annual meeting Field of Language, Literature, Arts, and Culture "The Contribution of Language, Literature, Art and Culture in Digital Era" BKS PTN West Region.
- 9. 2018. article **ISSLE** Proceding, https://knepublishing.com/index.php/ KnEsocial/issue/view/102, (results of international seminar, 25—26 July 2017); "The effectiveness of module and compact disc poem learning based on local wisdom".
- 10. 2018, international seminar presenter of SULE-IC 2018, "The importance of material of instructutional planning based on character education".







































Bustang, Ph.D Universitas Negeri Makassar, Indonesia

Bustang, Ph.D is Lecturer in Mathematics Education at Universitas Negeri Makassar, and currently working as a full-time PhD student at Mathematics Education Centre, School of Science, Loughborough University, UK with financial support from LPDP. My research interests in mathematics education are: Probabilistic Reasoning, Design-Based Research, Secondary Education and Statistics Education. My current project is investigating Indonesian students' and teachers' probabilistic reasoning.





































Dr. Meryansumayeka, S.Pd., M.Sc Universitas Sriwijaya

Dr. Meryansumayeka, S.Pd., M.Sc is a lecturer in mathematics education at Sriwijaya University. In addition, he also works as a Journal Editor: Lentera Journal Reviewer of accredited national journals: JDM, JPM, Gantang. Research interests are Realistic Mathematics Education, Design Research, ICT Media and Higher Order Thinking Skills (HOTS). She has conducted 12 studies, 10 funded service experiences in the last 5 years. There have been 39 publications of scientific articles in journals in the last 5 years. 13 times as a scientific seminar speaker (oral presentation) in the last 5 years. And has produced 7 books in the last 5 years.







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Dr. Meilinda, M.Pd Universitas Sriwijaya

Dr. Meilinda, M.Pd is an active lecturer in Biology education study program (2005present). She area of expertise is science education, systems thinking, systems approach. He was Head of the BK Lab: 2020-2021, Head of Teaching Lab: 2022- now, Chief Editor of the Biology Learning Journal (JPB) 2019-now, UNSRI CDC Team: 2021-now .She has done 8 research grants, 23 scientific publications, for the last 5 years.





































Dr. Syarifuddin, M.Pd Universitas Sriwijaya

Dr. Syarifuddin, M.Pd is a history education lecturer at Sriwijaya University. He has conducted 9 Research in the last 5 years., 7 Community Service in the last 5 years.. 68 Scientific Article Publications in Journals in the last 5 years., 15 Books in the last 5 years., and 5 Patents/IPR (Intellectual Property Rights) for the past 5 years.



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THE 9TH SEA-DR IC

Friday, 19th May 2023 **OPENING CEREMONY**

07.30 to 08.30 (Jakarta time GMT+7)

Link zoom:

https://us06web.zoom.us/j/86772164275?pwd=SFVhNzg0TVlBUGFHend1d1IvU0N3UT09 Meeting ID: 867 7216 4275 Passcode: mathedu

Time	Agenda	PIC		
07.20 to 07.30	Performance "Tanggai Dance- South	Students of Faculty of Teacher		
	Sumatra Province Traditional	Training and Education		
	Welcoming Dance"			
07.30 to 07.40	Master of ceremony – opening	Arvina Yudiagustin, Cici		
		Ratnanenci		
07.40 to 07.50	Indonesian Anthem "Indonesia Raya"	Bunda Harini, M.Pd		
07.50 to 08.00	Chairs Report	Prof. Dr. Zulkardi, M.I.Komp.,		
		M.Sc,		
08.00 to 08.10	Speech from Dean of FKIP	Asc. Prof. Dr. Hartono, M.A		
08.10 to 08.20	Opening Remarks	Prof. Dr. H. Anis Saggaff,		
		MSCE., IPU., ASEAN. Eng		
08.20 to 08.25	Prayer	M. Hasbi Ramadhan, M.Si.		
08.25 to 08.30	Master of Ceremony – Closing	Arvina Yudiagustin, Cici		
		Ratnanenci		

	PLENNARY SESSIONS		
08.30 to 17.00 (Jakarta time GMT+7)			
08.30 to 09.30	Keynote – Assoc. Prof. Dr. Maarten Dolk	Moderator: Weni Dwi	
45' presentation	(Utrecht University, Netherland) -Offline	Pratiwi, S.Pd.,M.Sc.	
15' QnA Session		Co-host : Tia	
09.30 to 10.30	Keynote – Asst. Prof. Dr. Choy Ban Heng	Moderator: Jeri	
45' presentation	(National Institute of Education, Singapore) -	Araiku, M.Pd	
15' QnA Session	Online	Co-host : Alya	
10.30 to 11.30	Keynote – Assoc. Prof. Dr. Masitah Shahrill	Moderator:	
45' presentation	(Universiti Brunei Darussalam, Brunei	Elika Kurniadi, M.Pd	
15' QnA Session	Darussalam)- Online	Co-host: Rani	
13.00 to 13.30	Performance "Traditional Dance"	Students of Faculty of	
		Teacher Training and	
		Education	
13.30 to 14.30	Keynote - Assoc. Prof. Dr. Arthur Bakker	Moderator:	
45' presentation	(Utrecht University, Netherland)-Online	Viona Adelia, S.Pd	
15' QnA Session		Co-host :Fathimatuz	
14.30 to 15.30	Keynote – Assoc. Prof. Hartono, M.A	Moderator:	
45' presentation	(Universitas Sriwijaya, Indonesia) - Online	Dr. Duano Sapta	
15' QnA Session		Nusantara	
		Co-host : Azzahra	
15.30 to 16.30	Keynote – Prof. Dr. Zulkardi ,	Moderator:	
45' presentation	M.I.Komp.,M.Sc	Yovika Sukma, M.Pd	
15' QnA Session	(Universitas Sriwijaya, Indonesia) -Offline	Co-host : Tia	
16.30 to 17.30	Information for the 2 nd day of conference	Dr. Duano Sapta	
45' presentation		Nusantara	
15' QnA Session			











ZOOM MEETING LINKS

May 20th, 2023

Link zoom:

https://us06web.zoom.us/j/86772164275?pwd=SFVhNzg0TVlBUGFHend1d1IvU0N3UT09

Meeting ID: 867 7216 4275 Passcode: mathedu

D.	1117
Room	Link Zoom
Parallel Room 1 (Invited Speakers, Presenters, and Participants)	Link zoom: https://us06web.zoom.us/j/89588170364?pw d=N2xibTBxWTltN2ZpWURxQXRnTFBmU T09
	Meeting ID: 895 8817 0364 Passcode: fkip
Main room/Parallel Room 2 (Invited Speakers,	Link zoom:
Presenters, and Participants)	https://us06web.zoom.us/j/86772164275?pwd=SFVhNzg0TVlBUGFHend1d1IvU0N3UT09
	Meeting ID: 867 7216 4275 Passcode: mathedu
Parallel Room 3 (Invited Speakers, Presenters, and Participants)	Link zoom: https://us06web.zoom.us/j/89588170364?pw d=N2xibTBxWTltN2ZpWURxQXRnTFBmU T09
	Meeting ID: 895 8817 0364 Passcode: fkip
Main room/Parallel Room 4 (Invited Speakers, Presenters, and Participants)	Link zoom: https://us06web.zoom.us/j/86772164275?pw d=SFVhNzg0TVlBUGFHend1d1IvU0N3UT0 9
	Meeting ID: 867 7216 4275 Passcode: mathedu











Saturday, May 20 th, 2023					
	P		resenter Offline		
			carta time GMT+7)		
	Time Room			Moderator	
08.00 -		1		ul Adha, M.Pd	
08.00 -		2		ika Sari, M.Pd	
08.40 -				QnA Session	
			resenter Offline carta time GMT+7)		
Tin		Room		Moderator	
12.20 –		1		ul Adha, M.Pd	
12.20 –		2		ika Sari, M.Pd	
12.40 –	13.00	DI ENNIA D		QnA Session	
	00.0		Y SESSION		
Moderator:	09.0	0 to 11.00 (Ja	karta time GMT+7)		
Dr. Meryansuma	veka M Sc				
Time	iy cha, 111.50		Invited Speaker		
09.00 – 09.30	Prof. Dr. Zaleh	a Ismail	In the opeand		
07.00			asysia, Malaysia) –	Online	
09.30 - 10.00	Prof. Dr. Ratu		• • • • • • • • • • • • • • • • • • • •		
	(Universitas Sri				
10.00 - 10.30	Prof. Dr. Rully				
	(Universitas Ah	mad Dahlan,	Indonesia) - Onlin	ne	
10.30 - 11.00	QnA Session				
		PLENNAR	Y SESSIONS		
		,	karta time GMT+7)		
11.00 to 12.20	•	aker Session 1	- Prof. Rooselyna	Moderator:	
60' presentation	E.,Ph.D (Universites Negeri Surabaya Co-bost				
20' QnA Session	(Universitas Negeri Surabaya, Co-host:				
	Indonesia) - Online Alya Khairunnisa				
		aker Session 2	– Shintia Revina,		
	Ph.D	akei Bession 2	Simula Revina,		
		n University	of Technology,		
	Netherlan	•			
	- Online	<u> </u>			
11.00 to 12.20	Invite Spea	aker Session 1	- Assoc. Prof.	Moderator:	
60' presentation		nderawati, M		Yovika Sukma, M.Pd	
20' QnA Session	(Universitas Sriwijaya, Indonesia) Co-host:				
	- Offline Azzahra				
	Invite Speaker Session 2 – Assoc. Prof.				
	Dr. Zahra Alwi, M.Pd (Universitas Sriwijaya, Indonesia)				
-Offline					
13.00 to 14.20		aker Session 1	– Bustang, Ph.D	Moderator:	
60' presentation	Invite Speaker Session 1 – Bustang, Ph.D Universitas Negeri Makassar, Indonesia			Jeri Araiku, M.Pd	
20' QnA Session	Co-hos		Co-host:		
	- Online Alya Khoirunnisa				
	Invite Speaker Session 2 – Dr.				
	Meryansumayeka, S.Pd., M.Sc.				
	· ·	as Sriwijaya,	Indonesia)		
	-Offline				











14.00 to 15.20	Invite Speaker Session 1-	Moderator:	
60' presentation	Dr. Syarifuddin, M.Pd	Dr. Duano Sapta	
20' QnA Session	(Universitas Sriwijaya, Indonesia)	Nusantara	
	-Offline	Co-host:	
	Invite Speaker Session 2 – Dr. Meilinda	Fathimatuz Zahrah	
	(Universitas Sriwijaya, Indonesia)		
	-Offline		
17. 00 – Finished	UNSRI Mathematics Education Doctoral Proposal Seminar with the theme		
	"Design Research for All"		



Room Schedule for Presenters

Saturday, 20th May 2023

PARALLEL 1

10.00 to 11.00 (Jakarta time GMT+7)

Tasks Cesti Kaslati Siregar Teaching model development of Culturally Responsive English Teaching (CRET) at primary schools in Indonesia: Design based research Metacognitive Activities of Tual 1 Public Middle School Students in Solving Problems of the Two Variable Linear Equation System (SPLDV Viewed From Extrovert and Introvert Personality Types Luh Putu Putrini Mahadewi Adaptive Learning In Context: A Need Analysis For System Design A Yani Ranius Cerdas Segabagai Pengguna Aplikasi KAI Acces Tangram Sultan" Blended Folkstory and Geometry Games As A Media for Introducing Angle and Side of Two-Dimensional Figure in 2nd Grade Elementary School Teks and Chances: Designing a Visual Artifact in Teaching Probability Maurish Sofie Rahmi Batita Research Methods Class-Aided Mobile Application using Design Thinking Approach Hermina Disnawati Learning Trajectory: How Can Timorese Motif Context Suppor Students' Understanding In Learning Number Pattern? Ai Tusi Fatimah Paving the Way: Design Research for STEAM-H-Based Mathematics Learning in Agribusiness Vocational High Schools Development of an e-module based on flip builder multiplication materia for second grade students at SD Negeri 59 Palembang Design Research on Mathematical Creative Thinking: Meta-synthesis Reasoning Skills Practices through Collaborative Mathematics Problems	No	Authors	Tittle	
2	1	Nor Azura Abdullah		
School Headmaster Managerial Skills: A Meta-Analysis				
Siti Nur'Iffatul Naqibah Haji Othman World Contexts	2	Yosua Damas Sadewo	Coaching GROW Model Implementation in Improving Elementary	
Othman World Contexts 4 Nurul Hafizah Alias Didax Virtual Algebra Tiles as an Intervention Tool in Solving Algebraic Equations: An Examination of Year 8 Student Perceptions 5 Veronika Fitri Rianasari Designing Learning Trajectory To Support Preservice Mathematics Teachers' Skills In Designing And Implementing Realistic Mathematics Teachers' Skills In Designing And Implementing Realistic Mathematics Teaching (CRET) at primary schools in Indonesia: Design based research Metacognitive Activities of Tual 1 Public Middle School Students in Solving Problems of the Two Variable Linear Equation System (SPLDV Viewed From Extrovert and Introvert Personality Types 8 Luh Putu Putrini Mahadewi Adaptive Learning In Context: A Need Analysis For System Design 9 A Yani Ranius Cerdas Segabagai Pengguna Aplikasi KAI Acces 10 Syarifah Nur Siregar "Tangram Sultan" Blended Folkstory and Geometry Games As A Media for Introducing Angle and Side of Two-Dimensional Figure in 2nd Grade Elementary School 11 Dennis Lee Jarvis B. Ybañez Teks and Chances: Designing a Visual Artifact in Teaching Probability 12 Maurish Sofie Rahmi Batita Research Methods Class-Aided Mobile Application using Design Thinking Approach 13 Hermina Disnawati Learning Trajectory: How Can Timorese Motif Context Suppor Students' Understanding In Learning Number Pattern? 14 Ai Tusi Fatimah Paving the Way: Design				
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17 Hajah Norliza Haji Adnan Reasoning Skills Practices through Collaborative Mathematics Problem	1.5	P 1 1 1	č č	
	16	Endang Istikomah	Design Research on Mathematical Creative Thinking: Meta-synthesis	
Based Tasks	17	Hajah Norliza Haji Adnan	Reasoning Skills Practices through Collaborative Mathematics Problem-	
			Based Tasks	











PARALLEL 1					
11.00 to 13.00 (Jakarta time GMT+7)					
	Main Room Breakout Room 1 Breakout Room 2				
	Moderator:	Moderator:	Moderator:		
Time	Ellika Kurniadi, M.Pd	Laela Sagita, M.Sc	Dr. Lisnani		
	Co-Host: Alya Khairunnisa	Co-Host: Rani Oktaria	Co-Host: Tia Rahmawati		
11.00 – 11.30	Prof. Rooselyna E.,Ph.D				
	(Universitas Negeri Surabaya, Indonesia)				
11.30 - 12.00	Shintia Revina, Ph.D				
	(Eindhoven University of Technology, Netherland)				
12.00 - 12.20	QnA Session				
12.20 - 12.50	Nor Azura Abdullah,	Lesti Kaslati Siregar,	Dennis Lee Jarvis B. Ybañez,		
	Yosua Damas Sadewo,	Fenty Madelin	Maurish Sofie Rahmi Batita,		
	Siti Nur'Iffatul Naqibah Haji	Madubun,	Hermina Disnawati,		
	Othman,	Luh Putu Putrini	Ai Tusi Fatimah,		
	Nurul Hafizah Alias,	Mahadewi,	Debora Simanjuntak,		
	Veronika Fitri Rianasari,	A Yani Ranius,	Hajah Norliza Haji Adnan,		
	Endang Istikomah,	Syarifah Nur Siregar,			
12.50 - 13.00	QnA Session				

PARALLEL 2					
11.00 to 13.00 (Jakarta time GMT+7)					
	Main Room Breakout Room 1 Breakout Room 2				
	Moderator:	Moderator:	Moderator:		
Time	Yovika Sukma, M.Pd	Arika Sari, M.Pd	Viona Adelia, S.Pd		
	Co-host: Azzahra	Co-host:	Co-host: Azna Putri		
		Fathimatuzzahrah			
11.00 - 11.30	Assoc. Prof. Dr. Rita Inderawa	ati, M.Pd.			
	(Universitas Sriwijaya, Indonesia)				
11.30 - 12.00	Assoc. Prof. Dr. Zahra Alwi, M.Pd.				
	(Universitas Sriwijaya, Indone	esia)			
12.00 - 12.20	QnA Session				
12.20 - 12.50	Sarah Inayah,	Edi Supriyadi,	Intan Buhati Asfyra,		
	Kusuma Dewi,	Nur Elisyah,	Yulizha Walanda,		
	Detia Aulia Oktarina,	Siti Maryam Rohimah,	M. Arrasikh Hidayatullah,		
	Susda Heleni,	Nora Surmilasari,	Floren Valentina,		
	Angel Mae Ombid,	Ratu Sarah Fauziah	Novita Ristiana,		
	Moch. Lutfianto	Iskandar	Septy Sari Yukans		
12.50 - 13.00	QnA Session	<u> </u>			



Paving the Way: Design Research for STEAM-H-Based Mathematics Learning in **Agribusiness Vocational High Schools**

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Abstract

This article reviews studies on the characteristics of design research and vocational mathematics knowledge that had been previously to pave the way for design research in STEAM-H (Science, Technology, Engineering, Agriculture, Mathematics, and Health)-based mathematics learning in agribusiness vocational high schools. There are thirty articles through systematic review research. We relate research design characteristics, vocational mathematics knowledge, and the STEAM-H learning approach. From the aspect of developing learning theory, there are soci-ocultural and activity theories. The boundary-crossing can support the implementation of the STEAM-H approach for linking the mathematical knowledge learned at school with the mathematics used in the workplace. Hypothetical Learning Trajectory design is rich in the agribusiness context. Agricultural facilities and technologies available in the school and workplace environment can support learning interventions. The retrospective analysis supports the effective use and connection of school and workplace mathematics.

Keywords: agribusiness, design research, STEAM-H, vocational mathematics























