



ABSTRACT FOR THE 1ST ALMA ATA INTERNATIONAL CONFERENCE ON EDUCATION (AAICE) 2023

"Education For Sustainable Development
Awareness Toward Society 5.0"

HELD FROM 16ST SEPTEMBER 2023

Alma Ata University, Yogyakarta, Indonesia

Welcome Speech : Chairman of AAICE 2023

Assalamu'alaikum, Wr. Wb.

Peace be upon you, and Allah mercy and blessings

Welcome to the 1st Alma Ata International Conference on Education (AAICE 2023). We are pleased to present this collection of conference abstracts from researchers, educators and professionals around the world to share knowledge and insights in the fields of Education, Social Affairs and Humanities.

This Abstract Book displays various abstracts, covering topics in the fields of Islamic Religious Education, Mathematics Education, and Elementary School Education. It is related to curriculum, learning innovation, learning technology, evaluation, STEM education, ethnomathematics and other relevant topics. We are proud to have received abstract submissions from renowned researchers, experienced educators, and talented students who have contributed their knowledge to this book. We also express our appreciation to the organizing committee for their dedication, contribution and sincere commitment in making this activity a success.

Finally, we would like to thank all participants, both as participants and presenters in AAICE activities for sharing expertise and knowledge which made the conference richer and more meaningful. The Abstract Book can certainly provide a valuable source of inspiration to stimulate new and innovative ideas, meaningful discussions for the advancement of knowledge in the fields of education, social and humanities, especially to AAICE activity participants and generally to all parties who need it. Wa'alaikumussalam Warahmatullahi Wabarakatuh.

Rino Richardo
Chairman of AAICE 2023
Department of Mathematics Education
Faculty of Tarbiyah and Teacher Training
Alma Ata University

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The 1st Alma Ata International Conference on Education (AAICE 2023)
Universitas Alma Ata, Yogyakarta, Indonesia

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6. Yusinta Dwi Ariyanti, M.Pd., Alma Ata University
7. Ahmad Anis Abdullah, M.Sc., Alma Ata University
8. Martalia Ardiyaningrum, M.Pd., Alma Ata University

Reviewer :

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14. Assoc. Prof. Sasithev Pitiporntapin, Ph.D (Kasetsart University, Thailand)
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Rundown Webinar
The 1st Alma Ata International Conference on Education (AAICE 2023)
Universitas Alma Ata, Yogyakarta, Indonesia
Hybrid Conference , September 16th 2023

TIME GMT+7	Activity	Moderator/PIC
07.00-08.00	<i>Registration</i>	<i>Committee</i>
08:00-08:15	<i>Local Dance</i>	<i>MC</i>
08.15-08.25	<i>Opening Session</i>	
08.25 - 08.35	<i>Recitation of Holly Quran</i>	
08.35 - 08.45	<i>National Anthem</i> <i>“Indonesia Raya”</i> <i>Mars Alma Ata</i>	
08.45-09.15	<i>Welcome speech</i> Prof. Dr. Hamam Hadi, MS., Sc.D., Sp.GK.	
09.15 – 09.25	Do’a	<i>Ibu Nyai</i> <i>Hj. Dra. Ida Rufaida Ali</i>
09.25 – 09.40	Break	<i>Committee</i>
<i>Keynote Session 1</i>		
09.40 - 10.10	<i>Speaker 1:</i> <i>Unlocking the Digital Ecosystem for Sustainable Education and Community Development</i> Dr. Wahyudi <i>Director of SEAMOLEC, Indonesia</i>	<i>Moderator</i> <i>Galih Albara Siddiq,</i> <i>M.Sc. Ph.D.</i>
10.10 – 10.25	<i>Discuss and Answering Question</i>	
<i>Keynote Session 2</i>		
10.30 – 11.00	<i>Speaker 2:</i> <i>MATHEMATICAL LITERACY FOR DIGITAL ERA:</i> <i>Review of Mathematical Literacy for the Utilization of Indonesia National Primary Mathematics Textbook</i> Prof. Masami Isoda, Ph.D <i>University of Tsukuba, Japan</i>	<i>Moderator</i> <i>Anggo Marantika, M.Sc</i>
11.00 – 11.30	<i>Speaker 3:</i> EdTech tools and TPACK in mathematics education Kok Min Ng, Ph.D <i>Casio, Singapore</i>	

TIME	Activity	Moderator/PIC
GMT+7		
11.30 – 12.00	<i>Speaker 4:</i> <i>Science Learning in Elementary School</i> Prof. Dr. Tomita Akahiko, Wakayama University, Japan	
12.00 – 12.15	<i>Discuss and Answering Question</i>	
12.15 – 13.15	Lunch Break	<i>Committee</i>
Keynote Session 3		
13.15 – 13.45	<i>Speaker 5:</i> <i>Enriching Educational Excellence for Sustainable Development (3ESD): A Case Study of Integrating Islamic Science Curriculum of Islamic Sciences Demonstration School, Prince of Songkla University, Thailand</i> Muhammadafeefee Assalihee, Ph.D Prince Songkla University, Thailand	<i>Moderator</i> <i>Fiska Ilyasir, M. S. I.</i>
13.45 – 14.00	<i>Discuss and Answering Question</i>	
Keynote Session 4		
14.00 – 14.30	<i>Speaker 6:</i> <i>AI in Mathematics</i> Dr. Andreas Daniel Matt Chief Executive Officer Bei Imaginary, Berlin, Germany	<i>Moderator</i> <i>Anggo Marantika, M.Sc</i>
14.30 – 15.00	<i>Speaker 7:</i> <i>Advancing STEAM Education Through New Technologies and Pedagogies</i> Prof. Zsolt Lavicza Johannes Kepler University, Austria	
15.00 – 15.15	<i>Discuss and Answering Question</i>	
15.15	Closing	<i>MC</i>
Parallel Session		
15.30 – 17.00	<i>Online Paralel Session</i>	<i>Modetator</i>
	<i>Offline Paralele Session</i>	
17.00	<i>Closing</i>	

KEYNOTES SPEAKER

Unlocking the Digital Ecosystem for Sustainable Education and Community Development

Wahyudi¹

¹Southeast Asian Ministers of Education Organization Regional Open Learning Centre (SEAMOLEC), Jakarta, Indonesia

Email : wahyudi@seamolec.org

Abstract

This presentation shall discuss the importance of a digital ecosystem for sustainable education and community development. A digital ecosystem is a network of interconnected digital resources, tools, and platforms that support various activities and services. By using digital technologies, we can create a more sustainable and inclusive society that benefits everyone. The presentation highlighted the benefits of digital technologies for education and community development, including accessibility, cost-effectiveness, flexibility, personalization, increased engagement and participation, and improved sustainability and resilience. However, there are several challenges that need to be addressed, including the digital divide, quality and credibility of online information, privacy and security concerns, lack of digital skills and competencies, and government policies and regulations. To overcome these challenges, collaboration and innovation are essential.

Keywords: digital ecosystem, sustainable education, community development, digital technologies, collaboration.

Dr Wahyudi
Director
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Dr Wahyudi currently is the Director of SEAMEO SEAMOLEC, Jakarta, Indonesia. Previously he served as Deputy Director for Programme and Development (DDPD) at SEAMEO Secretariat, Bangkok, Thailand from 1st of May 2019 to 30th April 2022. He was also appointed as Director of SEAMEO QITEP in Mathematics from 1st of January 2017 to 30th of April 2017. He has been working at SEAMEO QITEP in Mathematics since 2011 as Research Specialist and was appointed as Deputy Director for Programme from 2013 to 2016. He began his career as a secondary school teacher in 1989 and won a Scholarship in 1995 from the Indonesian Government to pursue his Master degree at State University of New York (SUNY) at Buffalo, USA. He has also won AUSAID Scholarship to continue his study at and gained his Doctor of Science Education from Curtin University of Technology, Perth, Australia in 2004. His research is concerned predominantly with the classroom learning environment in science and mathematics classrooms, Classroom Action Research and Lesson Study. In particular he focuses on student-teacher interaction and its effect upon teaching and learning practices and processes in science and mathematics classroom. He has been published his papers in referred international journals, as well as in a book chapter. He has been actively involved as journal editors, in conference steering committee and at regional level research. Before joining with SEAMEO QITEP in Mathematics, Dr Wahyudi was previously a Research Specialist of the Research and Development Division at SEAMEO RECSAM, Penang, Malaysia and spending four years in Malaysia from 2006 to 2010. During his time at SEAMEO QITEP in Mathematics, he was invited as Foreign Research Fellow at CRICED, the University of Tsukuba, Japan twice on 3 to 25 August 2012 and on 1 to 31 May 2016.

MATHEMATICAL LITERACY FOR DIGITAL ERA:

Review of Mathematical Literacy for the Utilization of Indonesia National Primary Mathematics Textbook

Masami Isoda

Center for Research on International Cooperation in Educational Development, University of Tsukuba, Tsukuba, 305-8572, Japan.
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Abstract

On the lecture, I provide the exemplar to develop mathematical thinking by using Textbook meaningfully. For explanation, this article provides the current meaning of mathematical literacy on Digital Era with using AI beyond the fourth industrial revolution, Mathematical Capitalism (Ministry of Economy, Trade and Industry, Japan., 2019 [32]) becomes a key issue in Education up to higher education in this changing. Mathematical Thinking provides the grand for computational thinking which is necessary to use AI such as ChatGPT. To explain mathematics as the key literacy subject in school and *re-view* it as universal literacy in the era, this article explains historical perspective of the meaning of mathematical literacy as well as current meaning of mathematical literacy through focusing on mathematical and computational thinking. This perspective is necessary for utilization of Indonesia National Primary Textbook in classroom to develop students who learn mathematics by and themselves as for students agency.

Curriculum Vitae



1. Name (Family, Given): **ISODA, Masaru** 磯田正美
2. Sex: Male
3. Date of Birth: 24, 10, 1959
- 4 Place of Birth Saitama, Japan
5. Titles: **Director**, Center for Research on International Cooperation in Educational Development (CRICED), and **Professor**, Faculty of Human Science, University of Tsukuba, Japan: **Ph.D.**(Education: Waseda University, Japan), **Honorary Ph.D.**(Honorary Doctor of Philosophy: Mathematics Education, Khon Kaen University, Thailand), **Honorary Professor** (Pontificia Universidad Católica de Valparaíso, Chile), and **Honorary Professor** (Universidad San Ignacio de Loyola, Peru).
5. Official Address: Center for Research on International Cooperation in Educational Development (**CRICED**), University of Tsukuba, 305-8572, Japan. isoda@criced.tsukuba.ac.jp, isodamasami@yahoo.co.jp
+81-29-853-7286
6. Official Website: Portal site for Isoda's projects: <http://math-info.criced.tsukuba.ac.jp> Portal site for CRICED: <http://www.criced.tsukuba.ac.jp/en/> CV: <http://www.trios.tsukuba.ac.jp/en/researcher/0000001461>
7. Working Experience:
- 2016- Director of CRICED, University of Tsukuba, Japan
 - 2014- Professor, Faculty of Human Science, University of Tsukuba, Japan Curriculum Advisor, Papua New Guinea (Mathematics and STEAM education)
 - 2002- JICA Specialist & Advisor (Honduras, Guatemala, El Salvador, Nicaragua, Dominican Republic, Bosnia&Herzegovina, Chile, Papua New Guinea, Nigeria and JICA Head Quarter)
 - 1999-2013 Associate Professor, Graduate School of Comprehensive Human Science, University of Tsukuba, Japan
 - 1993-1999 Assistant Professor, Institute of Education, University of Tsukuba, Japan 1989-1993 Associate Professor, Hokkaido University of Education, Japan
 - 1984-1989 Teacher, Komaba Secondary School attached to the University of Tsukuba, Japan 1983-1984 Teacher, Sayama High School, Saitama, Japan
- 8. Education:**
- 1982-1983 Master Program of Education, University of Tsukuba, Japan

EdTech tools and TPACK in mathematics education

Kok Min Ng, Ph.D

Casio, Singapore

Abstract

This presentation explores the role of TPACK (Technological, Pedagogical, and Content Knowledge) and EdTech tools in teaching and learning. We start by explaining what TPACK is and how it helps teachers set students up for success in the 21st century classrooms.

Most certainly, EdTech tools in the classroom isn't about using the latest and fanciest technology. We share a way to classify the meaningfulness of EdTech tools. This is where TPACK and EdTech intersect, allowing teachers to use technology to create better learning experiences. The goal is to shift towards a future where EdTech tools are not just a mere substitute or supplement to existing practices and instead, they are tools that solve many challenges in teaching and learning traditionally faced by teachers and students.

We will share practical examples of TPACK and EdTech tools in action. In particular, we will look at how scientific calculators are used in teaching and learning in Singapore. Singapore has been doing well in international studies like PISA and TIMSS. Some research have attributed this to the learning experiences and higher order thinking tasks that students are exposed to consistently. We explain some ways where scientific calculators are used to support teachers in these aspects.

By bringing TPACK and Educational Technology together, we can make big leaps to how we teach and learn, helping all students to work towards maximising their potential. We hope this talk will give you new and practical ideas for using TPACK and EdTech.

Dr. Ng Kok Min
Casio, Singapore



Dr. Ng Kok Min is a mathematics educator and textbook author from Singapore. He is currently the Education Manager at Casio Singapore. He has taught in various secondary schools and the National Institute of Education, Singapore. Dr. Ng is an author of the mathematics textbooks for the latest curriculum used in Singapore secondary schools. He has conducted training workshops for teachers in countries such as Singapore, Indonesia, Thailand and Brunei. His interest in education lies in the use of EdTech tools in the teaching and learning of mathematics. Dr. Ng also enjoys infusing logical puzzles into mathematics problems to develop higher order thinking skills. He believes that a combination of deep mastery of concepts and higher order thinking skills is an important essence to prepare our students to be future-ready members of the 21st century society.

Science Learning in Elementary School

Prof. Dr. Tomita Akahiko,

Wakayama University, Japan

Abstract

In the field of school education, there are two trends: the never-changing and the ever-changing. In recent days at schools, application of ICT, programming education, and STEAM education are the latest buzzwords. I will introduce some examples of these trends in elementary schools in Japan. By the way, at schools where buzz words are falling one after another with social and political pressure, and at an increasing rate recently, teachers who think they cannot keep up with these may become exhausted. The term STEAM education is an example. However, we can find elements of STEAM education in the reports of past practices that were not specifically intended to do that. I will introduce some examples from reports of Japanese elementary schools. This shows that we can rediscover elements of STEAM and other keywords in the practices we have been doing, rather than having to cut off our past methods in order to start the new one. We can encourage teachers who are tired of feeling that new words are falling one after another and convey to them that this is a new way to evaluate their past practices from a new perspective. Thus, we will be able to give many teachers confidence as STEAM education practitioners. In addition, STEAM education is not simply an extension of STEM education but can be a broad consideration of academics and ethics with the term “A.” For example, it could include local traditions, culture, inspiration and awe. I will introduce examples of how “A” could be broadly incorporated into astronomy education. It allows for more cross-curricular practices than ever before. Indonesia is a country where a broad range of A's can be incorporated.

Curriculum Vitae



Family name: Tomita

Given name: Akihiko

Pronouns: he/him

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Twitter: <https://twitter.com/TomitaAkihiko>

Research Map (in Japanese): <https://researchmap.jp/TomitaAkihiko166cm>

Work experience

April 2010 - present: Professor of Faculty of Education, Wakayama University.

April 1999 - March 2010: Associate professor of Faculty of Education, Wakayama University.

April 1997 - March 1999: Assistant professor of Faculty of Education, Wakayama University.

Education and degrees including research fellowship

April 1996 - March 1997: Research Fellow (Post-Doctoral) of the Japan Society for the Promotion of Science (JSPS) of Institute of Astronomy (IoA), University of Tokyo, Research subject: Observational Study of Triggering Mechanism of Starburst in Galaxies

July 1995 - March 1996: Research Fellow (Pre-Doctoral) of the Japan Society for the Promotion of Science (JSPS) of Graduate School of Science, Kyoto University.

March 1996: Doctor's degree of Science from Kyoto University, Doctor's Thesis: A Variation in the Star Formation Activity of Spiral Galaxies

March 1993: Master's degree of Science at Kyoto University, Master's Thesis: H-Alpha Velocity Fields of Giant H II regions in Four Nearby Dwarf Irregular Galaxies

April 1991 - March 1996: Graduate School of Science, Kyoto University (astronomy).

April 1987 - March 1991: Faculty of Science, Kyoto University.

Enriching Educational Excellence for Sustainable Development (3ESD): A Case Study of Integrating Islamic Science Curriculum of Islamic Sciences Demonstration School, Prince of Songkla University, Thailand

Muhammadafeefee Assalihee, Ph.D
Associate Professor, Faculty of Islamic Sciences (FaIs),
Prince of Songkla University, Pattani Campus,
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Abstract

This research study focuses on enhancing the educational quality of private Islamic schools through the implementation of an integrated Islamic science curriculum. A specific case study was conducted at the Islamic Science Demonstration School (IDS) affiliated with Faculty of Islamic Sciences (FaIs), Prince of Songkhla University (PSU). The primary objectives of this research were to establish a comprehensive framework encompassing key competencies in educational management, curriculum development, and the principles of integration. Additionally, the study aimed to investigate the extra-curricular activities offered by the school.

Through the investigation, the study identified four distinct aspects of learner competency: academic excellence, moral competence, leadership, and service mindedness. These competencies were identified as crucial components of holistic education. The curriculum adopted by the school emphasizes an integrated approach to Islamic science, aligning traditional educational principles with contemporary scientific understanding.

The research findings also revealed a set of principles governing the integration of Islamic teachings across various subjects. These principles encompassed six key areas, fostering a Islamic holistic approach to education that promotes a well-rounded development of students. Moreover, the study highlighted the school's commitment to sustainable development goals (SDGs) through its extra-curricular activities, emphasizing community engagement, sports, health, and leadership development.

In summary, this research underscores the significance of elevating education quality in private Islamic schools by implementing an integrated Islamic science curriculum. This study serves as a foundation for further enhancing educational approaches in similar institutions and promoting the harmonious integration of Islamic teachings with modern knowledge.

Keywords: 21st Century Education, Islamic School, Educational Management, Islamic Integration, Thai Muslim

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ADMINISTRATIVE POSITION

1. Associate Dean for Research and the Director of Islamic Demonstration School (2022 – Present).
2. Associate Dean for Research and Graduate Studies (2022 – 2023).
3. Associate Dean for Research and Graduate Studies (2020 – 2022).
4. Assistant Dean for Academic and Innovation (2018 - 2020).

ACADEMIC POSITION

1. Associate Professor (Education) (19 January 2022).
2. Assistant Professor (Education) (7 August 2019).
3. Lecturer (20 February 2017).

EDUCATIONAL BACKGROUND

1. Bachelor of Education (Teaching Sciences, Faculty of Education, Prince of Songkla University, Thailand)
2. Master of Education (Curriculum Studies, School of Education, Universiti Sains Malaysia, Penang, Malaysia)
3. Ph.D. (Development Education, Faculty of Education, Chulalongkorn University, Thailand)

Teaching Subjects

1. Instruction for Thinking Process Development.
2. Islamic Pedagogy.
3. Educational Research and Research in Islamic Education.
4. Educational Measurement and Evaluation.
5. Educational Quality Assurance.

AWARDS

1. Pride of PSU (Outstanding National Research Presentation) for the Year 2022 (B.E. 2565).
2. Outstanding Researchers, Faculty of Islamic Studies, for the year 2021 (B.E. 2564).
3. Outstanding Researchers, Faculty of Islamic Studies, for the year 2019 (B.E. 2562).
4. "Honorable Mention" Research Award for outstanding research in the field of Social Sciences by the Thai Society for Sociology, 2020 (B.E. 2563).

FIELDS OF EXPERTISE

1. Development Education
2. Islamic School Development and Administration
3. Teachership and Pedagogy
4. Parental Education

Communicating the Mathematics of Artificial Intelligence

Dr. Andreas Daniel Matt
Chief Executive Officer Bei Imaginary, Berlin, Germany

Abstract

In this keynote, experiences and challenges around communicating the mathematics of core algorithms of AI, in particular Machine Learning will be presented. How can the mathematics behind Neural Networks or Reinforcement Learning be explained? What is Gradient Descent, how does Q-learning work, what are stochastic processes? We focus on open-source and interactive resources to enable a playful and self-discovery approach towards learning. School students - or also a general public - can experiment with neural networks and train them themselves or guide a small learning robot through a 2D maze. We will show exhibits of an AI exhibition, an open curriculum for AI workshops and will go a bit deeper into a free MOOC on AI for educators with additional classroom material and mathematical explanations. At the end, we will also present a new project on AI and electronic music.

Dr. Andreas Daniel Matt
Chief Executive Officer Bei Imaginary, Berlin, Germany



Dr. Andreas Matt is the director of IMAGINARY, a Berlin-based non-profit organization dedicated to creating new interactive ways of exploring mathematics, artificial intelligence, and other sciences. He is from Austria and has a Ph.D. in Mathematics in the field of Machine Learning. He has been involved professionally in mathematics engagement and the IMAGINARY project since 2007. His main expertise is in developing modern concepts of knowledge transfer with a strong focus on participation. He has lived for several years in Argentina and in Pakistan, and coordinated mathematics outreach projects in 20 African countries. His work was awarded the Media Prize of the German Mathematical Society 2013 and the ECSITE Mariano Gago Award 2020, among others.

Advancing STEAM Education Through New Technologies and Pedagogies

Professor Zsolt Lavicza

Linz School of Education, STEM Education Centre, Johannes Kepler University, Linz,
Austria

Abstract

This presentation will center on the advancements in technologies and teaching methods within STEAM education. It emphasizes the growing importance of cultivating creative thinking in educational contexts and the need for innovative instructional approaches that span different subjects. The session showcases notable research in STEAM, with a primary focus on mathematics. It highlights collaborative endeavors with the Experience Workshop Movement and GeoGebra, exploring recent advancements like Augmented Reality, 3D Printing, Machine Learning, and Mobile experiments. Furthermore, the discussion delves into the transformative potential of robotics, demonstrating how they can elevate students' mathematical skills and seamlessly merge the digital and physical dimensions of learning. An additional topic of exploration is the utilization of Big Data to recognize and nurture creative thinking processes. These technological and pedagogical progressions provide fresh outlooks on fostering creativity, redefining STEAM instruction and learning methods, and presenting appealing avenues for collaborative engagement within these dynamic fields.

Professor Zsolt Lavicza

Linz School of Education, STEM Education Centre,
Johannes Kepler University, Linz, Austria



Short Bio:

Professor Zsolt Lavicza (BA, BA, MS, MA, MPhil, PhD)

Prof. Zsolt Lavicza earned degrees in mathematics and physics in Hungary and then pursued postgraduate studies in applied mathematics at the University of Cincinnati. While teaching mathematics in Cincinnati, he became passionate about researching issues related to teaching and learning mathematics, particularly the use of technology in undergraduate mathematics education. Afterwards, Prof. Lavicza worked on several research projects examining technology and mathematics teaching in a variety of classroom environments at the Universities of Michigan and Cambridge. He has also made significant contributions to the development of the GeoGebra community and participated in developing research projects on GeoGebra and related technologies worldwide. Currently, he is a Professor of STEM Education Research Methods at the Linz School of Education, Johannes Kepler University, Austria. He leads numerous research projects worldwide related to technology integration into schools, coordinates research projects, teaches educational research methods worldwide, and oversees the doctoral program in STEAM Education at JKU.

List of Publications:

https://scholar.google.at/citations?hl=en&user=1526ABEAAA&view_op=list_works&sort_by=pubdate

<http://researchgate.net/profile/Zsolt-Lavicza/>

PRESENTER

Class : Class 1
Moderator : Esthi Nawangsasi, S.Pd., M.A
Topic (Section) : Mathematics Education (Online)

No	Name	Article Title	Institution
1	Sri Wulandari Danoebroto	Mathematical Literacy for Environmental Awareness: Viewed from The Lens of Ethnomathematics	SEAMEO QITEP in Mathematics, Indonesia
2	Jasper L. Pastrano; Naci John C. Trance	Science and Mathematics Knowledge of Senior High School Students as Requisite to STEM Degree Program	Iloilo Science and Technology University; La Paz, Iloilo City, Iloilo, Philippines
3	Nuril Huda; Muhammad Al Farabi	Utilization of Contextual Based Worksheets (LKPD) to Improve Mathematics Literacy of Mts N 3 Jombang Students	State University of Maulana Malik Ibrahim Malang, Indonesia
4	Fahmi Abdul Halim; Puji Savvy Dian Faizati; Ase Astutik ;	Analysis of the Creative Thinking Level of Klakah State High School Students Through Take and Make a Quiz (TMQ) Algebraic Expressions	STKIP PGRI Lumajang, Indonesia
5	Pasttita Ayu Laksmiwati; Guillermo Bautista; Mathias Tejera; Zsolt Lavicza; Milah Nur Kamilah	Crafting Imagination: Exploring The Potential of 3d Printing For Elevated Design Activities	Linz School of Education, Johannes Kepler University, Austria; UP National Institute for Science and Mathematics Education Development, The Philippines; Universitas Muhammadiyah Tasikmalaya, Indonesia
6	Wahid Yunianto; Bungkus Dias Prasetyo; Santika Lya Diah Pramesti; Zsolt Lavicza;	Integrating Computational Thinking In Mathematics Lessons	Linz School of Education, Johannes Kepler University, Austria; SEAMEO QITEP in Mathematics, Indonesia; UIN K.H AR Wahid, Indonesia
7	Jorge Soto- Andrade	The fish is the last one to see the water	University of Chile, Santiago, Chile.

Mathematical Literacy for Environmental Awareness: Viewed from The Lens of Ethnomathematics

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Abstract

Mathematical literacy for environmental awareness aims to provide environmental education to students through issues such as pollution, climate change, forest burning and so on. Environmental issues are important to add as examples of the application of mathematics in the real world in the context of Education for Sustainable Development. The role of mathematics in this case is as a language for reformulating concepts related to environmental issues and as a tool for modeling environmental problems. It is interesting how local wisdom with an environmental preservation perspective can be adapted and developed through ethnomathematics studies. Several ethnomathematics studies show the value of local wisdom in appreciating environmental preservation, for example the Javanese wisdom regarding *pranoto mongso* which applies mathematical modeling to determine the season system, then Kampung Naga which is designed to be energy efficient and responsive to the local climate and cultural context. Therefore, it is possible to develop sustainable and culturally appropriate mathematical literacy.

Keywords: *environmental awareness, ethnomathematics, mathematical literacy*

**Science and Mathematics Knowledge
of Senior High School Students as Requisite to STEM Degree Program**

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Abstract

By implementing the K to 12 curriculum, the Philippines adheres with the global standards in basic elementary and secondary education and gives more emphasis to kindergarten. This education reform gains approval and objections from numerous groups and individuals for various reasons. In this curriculum, students who prefer to enroll in college will choose a program most likely related to their chosen tracks such as Academic, Technical-Vocational-Livelihood, and Sports and Arts. However, a lot of students enrolled in college chooses an academic program not related to their tracks enrolled in senior high school, thus, commencing a problem. The present study focuses at determining students' weak and strong areas in science and mathematics content knowledge. This weak and strong areas were identified based on the responses of about three thousand students to a validated researcher-made multiple-choice test. The study underscores the importance of the level of students' proficiency in science and mathematics as essential requisite to STEM courses and degree programs.

Keywords: content knowledge, science and mathematics proficiency, Philippine education reform

Utilization of Contextual Based Worksheets (LKPD) to Improve Mathematics Literacy of MTs N 3 Jombang Students

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Abstract

Based on the results of the 2018 Program for International Student Assessment (PISA) survey, it shows that Indonesia's mathematics literacy skills are still relatively low, ranking 72 out of 78 countries with a score of 379. In addition, it is supported by the results of the evaluation analysis of the Daily Assessment Week (PPH) even semester of the 2022/2023 school year at MTs N 3 Jombang which shows 23 students (82.14%) have mathematical literacy skills with a sufficient predicate. This study aims to describe the utilization of contextual-based LKPD to improve the mathematical literacy skills of MTs N 3 Jombang students. This type of research is class action research (PTK) with the subject of 28 students from class VIII L MTs N 3 Jombang Academic Year 2022/2023. The data collection techniques used were tests, interviews, and documentation. The data analysis technique procedures used are data collection, data reduction, data processing, and conclusion drawing. Based on the results of the study showed an increase in mathematical literacy skills by utilizing contextual-based LKPD. The increase that occurred was (1) In the initial stage the percentage of students' mathematical literacy skills predicated on good was 17.86%, (2) In cycle I the percentage of students' mathematical literacy skills predicated on good was 39.29%, (3) In cycle II the percentage of students' mathematical literacy skills predicated on good was 78.57%. It can be concluded that the use of contextual-based LKPD can improve the mathematical literacy skills of MTs N 3 Jombang students.

Keywords: Contextual Based Worksheets, Mathematics Literacy

Analysis of the Creative Thinking Level of Klakah State High School Students Through Take and Make a Quiz (TMQ) Algebraic Expressions

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Abstract

Creative thinking is one of the abilities that must be developed in students in accordance with national education goals and abilities that must be possessed in the era of the industrial revolution 4.0. This research is a qualitative descriptive study that aims to describe the level of creative thinking and identification of students' difficulties through Take and Make a Quiz (TMQ) Algebraic expression based on aspects of flexibility and originality. TMQ quiz in the form of choice questions and short entries, then analyzed descriptively qualitatively. Based on the results of the analysis, the creative thinking level of the Klakah State Senior High School students Class X MIPA 2 of 26 respondents' answers according to the flexibility and originality aspects, on the Take a Quiz question. The percentage of the total correct answers completing the TMQ equivalent of algebraic expressions, the results obtained are the average total creative thinking of students, which is 28.6% which if viewed from the aspect of flexibility and originality, the level of creative thinking of SMA Negeri Klakah students is in the category of quite flexible and quite original. Identification of the types of students' difficulties in creative thinking, namely students who have low abilities have difficulty describing questions from questions, do not understand the meaning of sentences, some expressions are equivalent and not equivalent, have difficulty finding algebraic values that are not equivalent to the questions, lack of understanding of the concepts used in the problem. calculation, difficulty in determining the formula.

Keywords: Creative thinking, Take and Make a Quiz, Algebraic Expression

Crafting Imagination: Exploring The potential of 3D Printing for Elevated Design Activities

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Abstract

3D printing technology has already been explored to substantially contribute to students' knowledge and learning process. More recently, 3D printing technologies are becoming increasingly popular in educational contexts. This advanced technology leads to increasing support for how 3D printing technology can be implemented by teachers, including in STEAM lessons. This study provided valuable insights for practitioners on how teachers can enact through exploring novel technology in a classroom context. For example, exploring 3D printing technology might lead students to become designers, develop prototypes, and utilise 3D models to solve real-world mathematics problems. In addition, these approaches enable students to utilise multiple representations to develop ideal designs by bridging their prior knowledge in mathematics and modelling skills to solve contextual problems. The results provide a better recommendation for implementing 3D printing technology in STEAM education to promote students' design activities. The findings also presented the implications for STEAM learning, which creates in-class activities with novel technology by evolving science, technology, arts, and mathematics concepts to solve real-world problems.

Keywords: 3D printing technology, design process, STEAM education, modelling.

Integrating Computational Thinking in Mathematics Lessons

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Abstract

Computational thinking (CT) has gained great attention worldwide and become a buzzword in recent years. Some European and Asian countries have reformed their curricula to include CT in the school subjects such as computer science, mathematics, science, and others. To implement CT successfully, teachers need support with sufficient CT training and examples. To support with exemplary lessons, this study aimed to develop integrated CT and mathematics lessons using software that mathematics teachers are familiar with. Utilizing educational design research (EDR), we developed GeoGebra-based math+CT lessons and spreadsheet-based math+CT lessons. This paper will only present the initial design of the GeoGebra-based lessons. The lessons have been implemented with a few students in Indonesia. The result showed that students could gained mathematical concepts as well as CT skills. We realized that we had used too many errors for students in the debugging task. In the future, we revise the task with less errors for students to fix. By having less errors in their first experience seems to cause less trouble for students.

Keywords: Computational Thinking, Mathematics Lessons

The fish is the last one to see the water

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Abstract

It is nowadays progressively acknowledged that higher thinking skills in mathematics education involve embodiment, enaction, and also metaphorisation (understood as “looking at something and seeing something else”). Centuries ago, the Sufi way of teaching already emphasised these aspects, avoiding the pitfalls of mistaking teaching for conditioning and of putting the cart before the ox in teaching (i.e. beginning with the abstract and symbolic before allowing the learners to have the opportunity to experience the iconic and, most importantly, the enactive aspects of the contents to be taught). Current traditional teaching of mathematics in primary and secondary school, especially in the West, involves however significant cognitive abuse towards the learners, a phenomenon largely unacknowledged by the dominant educational culture, which is the last to see the abuse. In our research, as an antidote to this widespread thwarting of the learners inborn capacities of enacting and metaphorising, we aim at designing, implementing and assessing an enactivist metaphorical approach to the teaching and learning of mathematics, at various educational levels. We work mainly with prospective and in service teachers besides non mathematically inclined first year humanistic students at the University of Chile. We design open situations (which we call “learning rhizomes”), which foster problem posing, rather than problem solving and pre-given task executing, as well as promoting systemic thinking, a key resource for the 21st century. Results so far show how this approach can be a significant help to reconstruct the students’ relation to mathematics, towards a better sense-making, self-esteem, and self-efficacy.

Keywords: Mathematics education, Metaphor, Enaction, Embodiment, Sufi

Class : Class 2

Moderator : Fiska Ilyasir, M. S. I. & Dr. Aida Hayani

Topic (Section) : Islamic Education (Online)

No	Name	Article Title	Institution
1	Ahmad Salim, Khanifudin, Sukino	Changes In Student Behavior Post Online Learning (Study In Elementary Schools In Yogyakarta And Kalimantan)	Alma Ata University; IAIN Pontianak, Indonesia
2	Hidayatus Sholihah; Fatah Syukur; Ismail; Zaenurrosyid.	The Roles and challenges of Islamic teaching teachers to step on the school leadership Semarang, Indonesia	UNISSULA, UIN UIN Walisongo, Walisongo, Indonesia
3	Arifin; Indah Afrianti;Asmedy	Al-Quran Based On The Local Culture Learning “Nggahi Mbojo” For Tpq Students In Pajo District, Dompu Regency	STKIP Yapis Dompu, Indonesia
4	Husni; Abdul Azis; Selamet;	Framework for Implementing Sustainable Islamic Higher Education Campuses	Institut Agama Islam Darussalam (IAID), Ciamis-Jawa Barat, Indonesia
5	Faisal Bin Husen Ismail	Issues and Challenges of Vocational Tahfiz Education in Malaysia: An Analysis	Universiti Tun Hussein Onn Malaysia
6	Wahyu Kholis Prihantoro, Imam Suyuti, Ahmad Salim	Problems of Professional Competence of Islamic Education Teachers in Facing the Era of Disruption (Case Study at SMP Muhammadiyah Kasihan Bantul)	Alma Ata University, Indonesia
7	Khitam Muhammad Abdul Hamida	The Concept Of Children's In The Al-Qur'an	Univesitas Islam Ghaza, Palestina
8	Rizal Fathurrohman, Muhammad Gafarurrozi, Lathifatul Izzah	The Urgency of Islamic Religious Education Learning in Building Student Character in the Era of Disruption	Alma Ata University, Indonesia

**Changes In Student Behavior Post Online Learning
(Study In Elementary Schools In Yogyakarta And Kalimantan)**

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Abstract

The Covid-19 pandemic has affected different aspects around the globe, including education. This condition has initiated a sudden shift in teaching and learning model applied at school, from offline into fully online, then shifted into hybrid and offline learning. This sudden shift on learning models certainly has an impact on student competence, both in cognitive, affective and psychomotor aspects. In the affective aspect, there are many changes in students' attitudes after they have undergone online to offline learning for a long time. This study aims to reveal the polite and respectful behavior of students after online learning at SDN Pengkol, SDIT Ibnu Abbas, SDN 06 Pontianak, SDN 34 Pontianak. Through qualitative methods, namely in-depth interviews with 6 Islamic Religious Education teachers as respondents to find changes in respectful and polite behavior in students, factors that cause shifts in student behavior, as well as the efforts of 4 elementary schools in Yogyakarta and Kalimantan in dealing with changes in student behavior. The findings of this study indicate that there is a change in polite and respectful behavior among elementary school students in Yogyakarta and Kalimantan with indicators of speaking harshly, not shaking hands with the teacher, not using a friend's name when calling, not using Javanese kromo when communicating informally to students in Yogyakarta Elementary School. Factors causing a shift in student behavior due to the application of online learning methods that are not sensitive to the formation of student behavior, students feel free because there is no supervision from the teacher, and there is no role model displayed by the teacher, so this habit is carried over when they carry out face-to-face learning advance. The effort carried out by schools is to strengthen regulations by internalizing student behavior in students' daily lives, by building role models played by all teachers, especially PAI teachers.

Keywords: Student Behavior, Online Learning

The Roles, Opportunities and Challenges of PAI Teacher Leadership in Indonesia Senior High Schools Context

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Abstract

Islamic teaching (PAI) teachers need to step on the leadership to develop their competence. Leadership skill is a part of the important competences based on the religious ministry affair rules that has to be achieved by PAI teachers. This study aims to explore the role of PAI teachers leaders to lead the students to reach their best achievement, the opportunities and challenges for them to be PAI teachers leaders. This is a qualitative study conducted in several State Senior High Schools in Central Java, Indonesia. The interview, documentation, and observation were applied to collect data. The data collected was then analyzed based on Miles and Huberman, by simultaneously using three steps: reducing data, displaying data, and drawing a conclusion or verification data. The result shows that PAI teachers leaders in Several Senior High Schools have the roles to lead their pupils to reach the best students' achievement. In addition, PAI teachers leaders have the opportunity to develop their leadership skill if supported by the principal who distribute his / her leadership roles well, has the democratic leadership style in leading the school, so teachers are involved in decision - making. Whereas, the structure of school in which voluntarily the time of PAI teachers to lead the students outside of the classroom might be the hinder to lead outside the classroom, beside of other challenges such as teachers who do not competence yet, insufficient amount of hours in PAI, poor readiness of students to study, a variety of learning through unattractive media as well as a lack of facilities, then the focus of PAI teaching is still more on cognitive domain then the affective one.

Keyword: Roles, Opportunities, Challenges of PAI

Al-Quran Based On The Local Culture Learning “Nggahi Mbojo” For Tpq Students In Pajo District, Dompu Regency

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Abstract

This study aims to determine the Learning of Al-Quran Based on Local Culture "Nggahi Mbojo" in TPQ students in Pajo District, Dompu Regency. The type of research used in this research was descriptive qualitative research. Data collection techniques used in this study using observation, questionnaires, and documentation. The data analysis technique used in this research was that there were four stages in qualitative research data analysis, including: 1) data collection stage, 2) data reduction stage, 3) data presentation stage, and 4) conclusion drawing stage. Based on the results of data analysis, it can be concluded that learning the Al-Qur'an based on local culture "Nggahi Mbojo" was very effective as a support for the learning process of reading the Al-Qur'an for students at TPQ in Pajo District, Dompu Regency. Al-Qur'an learning that was integrated using local culture-based learning from Nggahi Mbojo was very interesting and this was evidenced from the results of the questionnaire which shows that students choose to strongly agree 30 people with a percentage of 50.84%, students who choose to agree 20 students with a percentage of 33.89%. These results were also supported by internal factors, namely the motivation and enthusiasm of the TPQ students by associating the local language in learning the Qur'an. Nggahi Mbojo can increase the interest and participation of students in participating in the Al-Qur'an learning process at TPQ and the ability of students in terms of mastering how to read the Al-Qur'an was very lacking, but by applying Al-Qur'an learning based on local culture Nggahi Mbojo students became more motivated because what was described was in the local language, namely Nggahi Mbojo which was easier to understand for students in TPQ Pajo District.

Keywords: Learning, Al-Qur'an, Local Culture, Nggahi Mbojo

Framework for Implementing Sustainable Islamic Higher Education Campuses

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Abstract

Even though most people know and are aware that the earth is experiencing a severe crisis, only a few of them take real action and participate in saving the earth from damage. This article offers a practical framework for managers of Islamic higher education institutions in developing environmentally friendly campuses. It is time for leaders of educational institutions to act concretely to save the earth by implementing environmentally friendly and sustainable campus development programs or policies. There are several frameworks that can be implemented in Islamic higher education institutions. First of all, campuses need to develop an environmentally friendly curriculum, then create community-based education, then improve the quality of the campus area and the surrounding environment, after that develop an environmentally friendly support system, and finally develop environmental-based education management.

Keywords : Framework, Implementing Sustainable, Islamic Higher Education

Issues and Challenges of Vocational Tahfiz Education in Malaysia: An Analysis

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Abstract

Tahfiz institutions are increasingly gaining a place in education in Malaysia and are growing rapidly in global rankings. In Malaysia, tahfiz recitation has been introduced since colonial times. The community and the government also provided assistance to ensure the smooth running of tahfiz education. However, Tahfiz graduates face their marketability situation after completing their education at Tahfiz institutions. It cannot be denied that the ability to master the Koran well gives them the opportunity to work as teachers or priests. However, through the increase in the number of tahfiz graduates every year, the competition for tahfiz graduates to work has become increasingly challenging. Therefore, the objective of this study aims to (1) identify the issues and challenges of vocational tahfiz students in Malaysia, (ii) explain the government's actions in empowering tahfiz graduates, (iii) formulate effectiveness and challenges to produce professional tahfiz students and technocrats at tahfiz institutions in Malaysia . This study uses a qualitative methodology, with data collection through books, journals, newspaper articles and document analysis. Therefore, studies related to the issues and challenges of vocational tahfiz education in Malaysia deserve the attention of all parties to deal with various issues and challenges that require immediate action from interested parties including the government, tahfiz schools, and the community.

Keywords: Tahfiz Institution, Vocational, Education

Problems of Professional Competence of Islamic Education Teachers in Facing the Era of Disruption (Case Study at SMP Muhammadiyah Kasihan Bantul)

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Abstract

The problem in this study is that there is still a low professional competence of PAI teachers in Muhammadiyah Kasihan Middle School in Bantul. This can be seen from the lack of optimal mastery of IT. As a result, the preparation of lesson plans and administrative tasks can not be completed properly, thus inhibiting learning activities. Even though in this era of disruption, advances in information technology have begun to replace the role of humans in several fields of work. This revolution changed from traditional things to a system supported by sophisticated machines. Technology provides opportunities for practical things to be completely automated and fully innovative in various sectors of life. Therefore, PAI teachers in Kasihan Bantul Muhammadiyah Middle School should optimize professional competence, especially mastery of technology. This type of research is descriptive qualitative, and uses a sociological approach. Data collection methods used include: observation, interviews, and documentation. The purpose of this research is to describe the problems faced by teachers in facing the era of disruption. The results of this study indicate that the problems and solution of PAI teacher professional competence in facing the era of disruption include: 1) The basic ability of teachers in the IT field is still low, 2) The availability of inadequate IT facilities, 3) The convenience of teachers in using conventional learning methods, which are considered easier and less difficult.

Keywords: Professional Competency Problems, PAI Teachers, Disruption Era

The Concept Of Children's In The Al-Qur'an

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Abstract

Along with the development of the increasingly blind to the globlasasi that a lot of negatively affect the child. Beliefs that can stem this negative impact, therefore Islamic education is very necessary in this case. And the authors chose the letter Luqman verses 12-19 because in it is full of advice to build morals and increase faith in the child. The results showed that: (1) The concept of children's education. (2) The concept of children's education in the perspective of Qur'an letter Luqman verses 12-19 illustrates the emphasis of the material and methods of children's education. Educational materials that are taught include education of aqidah, shariah, and morals. The method used is with maw'idah (advice). (3) Actualization of the development of the concept of education of children in this era of globalization is to develop Islamic life-based curriculum life skill, Applying contextual approach of learning PAI on the aspect of faith, Implementing the integration of faith with science and technology. Keywords: Concept of Child Education In Perspective Qur'an letter Luqman verses 12-19.

Keyword: Concept, Children, Al-Quran,

The Urgency of Islamic Religious Education Learning in Building Student Character in the Era of Disruption

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Abstract

This study is a literature survey that highlights the importance of Islamic religious education in shaping character in the era of disruption. This study aims to collect and analyze papers on the urgency of PAI in building student character in the era of disruption. A literature review design was applied, and articles were collected using search engines such as Google Scholar, ScienceDirect, and Knowledge Map. Publications from 2017 to 2021 were used as criteria for papers. According to the articles collected, the era of disruption is increasingly turning traditional orders into robots, drowning the soul and character of teachers and students who unwittingly demand a lot of material. Thus, learning between teachers and students often brings problems today. Due to the influence of this era of disruption, PAI learning is also said to be a way out in reducing and avoiding juvenile delinquency, as well as a form of character building for students in schools. The findings from this literature review are: 1) PAI learning in schools is considered still relevant in balancing the character of students as the influence of the era of disruption. 2) PAI learning can build student character in this era of disruption by relying on some of the values contained in it, such as character education through teacher intermediaries, taking lessons from each material content, and exemplary values.

Keywords: Islamic education, Student Character, The Age of Disruption, Learning

Class : Class 3
Moderator : Galih Albara Siddiq, M.Sc. Ph.D.
Topic (Section) : Elementary Education (Online)

No	Name	Article Title	Institution
1	Kana Safrina Rouzi; Laelatul Badriah; Mufida Awalia Putri; Martalia Ardiyaningrum; Ahmad Syamsul Arifin; Nikmah Afifah; Sukati; Khanif Maksum	Local Wisdom Contribution To Strengthening Characters In Islamic Education Context In The New Normal	Universitas Alma Ata, Indonesia
2	Vera Yuli Erviana; Hangesti Khusnaningrum	The Development Of Focus Learning Media With Stem Approach (Science, Technology, Engineering) And Mathematics) Project-Based Learning Class Iv Sd Students	Universitas Ahmad Dahlan, Indonesia
3	Aiza Sunarto	Analysis Of The Implementation Of Character Education Values Through The Value Clarification Technique Method And Its Implications For The Formation Of The Pancasila Profile In Students In Oil Palm Pl	Universitas Terbuka, Malaysia
4	Wutthisak Bunnaen; Prayoon Wongchantra; Wittaya Worapun; Autthapon Intasena; Galih Albarra Shidiq	Environmental Literacy, Awareness and the concept of adaptation to global warming of Mahasarakham University Demonstration School (Secondary) Students.	Mahasarakham University, Thailand; Alma Ata University, Indonesia
5	Mufida Awalia Putri, Siti Nurhayati	Developing Canva Learning Media to Develop Creative Thinking Skills of Class V Semester 2 Students MI Al Islamiyah Gandekan	Alma Ata University, Indonesia
6	Suryandari; Khairunnisa; Meyninda Destiara	Development Of Virtual Laboratory Guidelines Based On Academic And Kampus Merdeka	Universitas Alma Ata; Universitas Islam Negeri Antasari, Indonesia

**Local Wisdom Contribution To
Strengthening Characters In Islamic Education Context
In The New Normal**

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Ahmad Syamsul Arifin⁵, Nikmah Afifah⁶, Sukati⁷, Khanif Maksum⁸

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Abstract

Local wisdom as a psychological aspect that determines character is closely related to Islamic education. Local wisdom is knowledge obtained from local residents through experience and integrated into an understanding of the culture and natural conditions of a place so that it becomes a habit. This habit eventually forms a character through learning that is obtained both at school and in the neighborhood. This article discusses the contribution of local wisdom to strengthening student character in the context of Islamic education. The method used is qualitative research which goes through three stages, namely, data reduction, data display, and conclusions. The research subjects were teachers who taught upper and lower grades at Madrasah Ibtidaiyah in Bantul Regency. Data analysis used is deductive. Data collection techniques using observation through Google Forms and interviews. The results showed that the contribution of local wisdom in strengthening character in the context of Islamic education greatly contributed because it was inserted in the form of songs, handicrafts and traditional games in learning and succeeded in strengthening children's character to become religious, high-integrity, independent and nationalist individuals.

Keywords: *Local Wisdom, Character Strengthening, Islamic Education*

Development of FOCUSKY Learning Media with STEM (Science, Technology, Engineering, and Mathematics) Approach Based on ProjectBased Learning for 4th Grade Elementary School Students

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Abstract

This study aims: 1) to determine the steps of developing Focusky media; 2) to determine the quality of Focusky learning media used in the learning process for the material of theme 8 'My Area' subtheme 2 'Uniqueness of My Area' lesson 2 using a STEM-based project-based learning approach for 4th-grade elementary school students. This study is a Research and Development (R&D) study. The development model employed in this study is the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The subjects in this study are media expert validation subjects, subject matter experts, and learning experts. Data analysis techniques involve both quantitative and qualitative data. The research results of the media quality test indicate that the media expert assessment obtained a score of 77.94 in the 'excellent' category. The subject matter expert assessment received a score of 78.57 in the 'excellent' category. The learning expert assessment received a score of 95.45 in the 'excellent' category. The teacher assessment obtained a score of 90.38 in the 'excellent' category. The cumulative result of product quality based on expert evaluations and teacher responses yielded an average of 87.18 in the 'excellent' category. Based on the assessment results of the quality test, it can be concluded that the Focusky learning media used in the learning process for the material of theme 8 'My Area' subtheme 2 'Uniqueness of My Area' lesson 2, with a STEM-based project-based learning approach for 4th-grade elementary school students, has been developed excellently and is suitable for instructional use.

Keywords: Focusky Learning Media, STEM, Project-Based Learning

Analysis Of The Implementation Of Character Education Values Through The Value Clarification Technique Method And Its Implications For The Formation Of The Pancasila Profile In Students In Oil Palm Pl

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Abstract

Value Clarification Technique (VCT) is a learning method that helps individuals recognize and distinguish between good and bad in solving a problem by recognizing and choosing important values in life. In its application, researchers provide exercises to help individuals choose the best solution in every moral problem. VCT is used to improve the development of character education and cognitive aspects of students in the classroom in learning Citizenship Education (Civics). This study aims to determine the analysis of the VCT learning model on Pancasila Profile in Class VI students of CLC FGV Sahabat. The results of the study found that the VCT learning model has a significant influence on the formation of character education with Pancasila profile in elementary school students. The research method used is mixed method which combines qualitative and quantitative methods as the object of research. In terms of the implications of VCT on the formation of Pancasila-profiled character education in students, it can be concluded that VCT can help students recognize and choose the essential values of Pancasila in school learning. By using VCT, students can learn to recognize and distinguish between good and bad to solve problems related to Pancasila values. This can help students develop a deeper understanding and appreciation of Pancasila, which can contribute to the formation of their Pancasila profile.

Keywords : Character Education Values, Value Clarification Technique

Environmental Literacy, Awareness and the concept of adaptation to global warming of Mahasarakham University Demonstration School (Secondary) Students.

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Abstract

This research aims to study environmental literacy, environmental awareness and the concept of adaptation to global warming of students at Mahasarakham University Demonstration School (Secondary) and compare environmental literacy, environmental awareness and concepts lead to behavioral adaptation to global warming used by Environmental literacy test, Environmental awareness questionnaire and the concept of adaptation to global warming questionnaire. The sample were 100 high school students. The research found that the students had environmental literacy in natural resources and the environment in moderate, literacy of ecology is high. but have a low level of literacy of environmental issues but have a low level of literacy of environmental issues. The students had a high level of environmental awareness of the overall and concepts of adaptation to global warming as a whole of students found that is at a very high level. The knowledge comparison of environmental awareness and the concept of adaptation to global warming of students. It was found that students of different sexes had environmental literacy, environmental awareness, and the concept of adaptation to global warming as a whole the difference was statistically significant at the .01 level. It can be seen that the management of learning about the environment is important for environmental literacy students environmental awareness and global warming concepts. Therefore, if students want to recognize the importance of environmental problems and global warming have a correct understanding by emphasizing the integration of learning management and activities. can be developed in environmental.

Keyword : Environmental Literacy, Awareness, and concept of adaptation, global warming

Developing Canva Learning Media to Develop Creative Thinking Skills of Class V Semester 2 Students MI Al Islamiyah Gandekan

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Abstract

The use of learning media makes it easier for teachers to convey messages in the form of learning materials to students and can achieve learning objectives properly. Technological developments can be utilized in education such as the use of learning media. Canva is an online design tool that has various features that can be used to create learning media. This study aims to find out how Canva-based video media can be developed in science learning for class V MI Al Islamiyah Gandekan and to find out the feasibility of Canva-based video media in science learning, and to determine the effect of using Canva-based video media on students' creative thinking abilities. The method used is the ADDIE Research and Development (RnD) model which includes five stages of development, namely analysis, design, development, implementation, and evaluation. The research was conducted at MI Al Islamiyah Pajangan with a sample of all fifth grade students. The research instruments used were pretest and posttest instruments to measure students' creative thinking skills. The results of this study are, (1) Development of canva learning media in science learning at MI Al Islamiyah Gandekan, namely determining KI, KD, learning objectives, materials and developing learning videos using Canva, then validated by experts, and used in the learning process. (2) The feasibility of the resulting media is in the very feasible category with an average score of 3.8, which means that the media is suitable for use as a learning medium for science with the theme of objects around us. (3) The results of the Mann-Whitney test carried out obtained sig. (2-tailed) 0.048 which means that in this study there was a significant difference between classes that used video animation and classes that did not use video animation on students' creative thinking abilities. The results of the ADDIE Steps are analysis showing the needs in learning, student characteristics and the learning process in class. The design stage produces the design of KI, KD, learning objectives, materials and videos. Then in the development stage produce developed videos, lesson plans and questions, in the implementation stage produce data from tests which are then processed to see students' creative thinking abilities. The last stage of the evaluation which produces feedback from student responses after using the video gets an average score of 3.6 which is in the very decent category.

Keyword : Canva Media, Creative Thinking, Science

Development Of Virtual Laboratory Guidelines Based On Academic And Kampus Merdeka

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Abstract.

In the new normal era along with the closure of the Covid-19 pandemic, face-to-face lectures and real laboratories have been suspended throughout the world. In this condition, digital teaching and resources such as virtual laboratories are alternative learning media that are feasible to apply. Considering that virtual laboratories are relatively web-based digital learning, virtual laboratories are available all the time and are able to provide realistic science skills to students. Due to the emergency adaptation conditions for Covid-19, the implementation of virtual laboratories tends to be carried out in urgent conditions, so they are not managed comprehensively. This research into the development of virtual laboratory guidelines focuses on the need for implementing virtual laboratory learning so that it is right on target in accordance with the needs of academic policies and Merdeka Belajar. The development of this guideline is oriented towards research on the development of the 4D method using questionnaires, interviews, observations and tests. Validation results show that the virtual laboratory guidelines are declared valid with a percentage of 97%. Meanwhile, in small-scale user testing or development stages, virtual laboratory guidelines tested as Highly Capable (90%) are used as a reference for preparing academic documents in preparation for implementing virtual laboratory learning.

Keywords: Virtual Labotaory, Academic Poilicies, Merdeka Belajar

Class : Class 1

Moderator : Robiatul Adawiya, M. Sc.

Topic (Section) : Mathematics Education (Offline)

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1	Ali Usman; Nikmatul Maskanah; Rhahma Wati	The Effectiveness of Problem-Based Learning Models to Improve Students' Mathematical Critical Thinking Ability: Literature Study	Alma Ata University, Indonesia
2	Umi Khasanah; Romadina Puspita Ratna; Mahfudhotul Alfitriani	Digital Transformation in Learning: Optimizing Computational Thinking Ability through Utilization of Geogebra	Alma Ata University, Indonesia
3	Mudrikah; Lamiyya Shubah; Sekar Agustiniingsih.	Analysis Of Joyfull Learning To A Growth Mindset In Learning Mathematics	Alma Ata University, Indonesia
4	Ali Yasin; Husna Sabila; Rodhiyana	Probabilistic thinking in Learning Mathematics : What, Why, How?	Alma Ata University, Indonesia
5	Revy Amilia Widiyantari; Haris Fernando Telaumbanua; Puji lestari	Strategi The Worked Example Effect Dalam Pembelajaran Matematika Untuk Meminimalkan Germane Cognitive Load	Alma Ata University, Indonesia
6	Andika Romadona	Applying Differentiation Instruction in the Mathematics Classroom: Strategies for Personalized Learning	Alma Ata University, Indonesia
7	Nahwa Fathia; Ailsa Nurotul Rohmah; Siska Azkiya	Problem Based Learning (PBL) Ethnomatematics Trough Mathematical Motivation To Improve The Ability To Think Creatively Mathematically	Alma Ata University, Indonesia
8	Subekti Anjarwati; Anggi Erna Aryani; Ika Noviatun; Ahmad Anis Abdullah	Ethnomatscience ExplorationThe Tradition of Spreading Apem Ya Qowiyyu Jatinom Klaten	Alma Ata University, Indonesia
9	Anggi Erna Aryani; Subekti Anjarwati; Ika Noviatun; Ahmad Anis A	Exploration of Ethnomatscience in Sonobudoyo Museum Yogyakarta and Implication in Mathematics and Science Learning	Alma Ata University, Indonesia

No	Name	Article Title	Institution
10	Zulfatun Mahmudah	Exploring the Effectiveness of Game-Based Learning in Developing Numeracy Skills among Elementary School Students	Alma Ata University, Indonesia
11	Gabriela Pamela Amanda; Ika Widya Astuti; Devicha Dwi Setyawati	Analysis Of Students' Pseudo Thinking In Solving Mathematics Problems In Flat Built Materials	Alma Ata University, Indonesia
12	Regi Abdi Nurohmatullah; Manisha Karina Sulaiman; Akidah Widyastuti.	Developing Resilience In Mathematics Education: A Conceptual Framework	Alma Ata University, Indonesia

The Effectiveness Of Problem-Based Learning Models To Improve Students' Mathematical Critical Thinking Skills: A Literature Study

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Abstract

One of the efforts to improve mathematical critical thinking is to replace the usual learning model with an activity-based learning model that emphasizes the active role of students in learning. One of the most effective learning models and is expected to improve students' mathematical critical thinking skills is the problem-based learning (PBL) model. Several studies have been conducted to evaluate problem-based learning models in improving students' mathematical critical thinking. However, there is still debate about the effectiveness of this model. Therefore, this study aims to evaluate the effectiveness of problem-based learning models in improving students' mathematical critical thinking skills. It is expected that the results of this study can make a positive contribution to the development of education in Indonesia, especially in the field of mathematics. This research is a qualitative study with descriptive analysis techniques with library research where this research seeks to describe existing phenomena, which are currently taking place. This article highlights the concept of problem-based learning in mathematics. This article uses the literature review method of knowledge, ideas, or findings contained in the literature. So that it can provide theoretical and scientific information related to students' mathematical thinking skills with the Problem Based Learning (PBL) learning model.

Keywords: *Problem-based learning, mathematical critical thinking, effectiveness.*

Digital Transformation in Learning: Optimizing Computational Thinking Ability through Utilization of Geogebra

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Abstract

Educational activities in the information technology era have changed from time to time. These changes are both challenges and opportunities, especially in the educational process. So that changes that occur in the learning process require learning strategies in accordance with the development of information technology. There are several learning strategies that can be carried out in the digital era, including carrying out innovations and evaluations with digital GeoGebra media. The research method of writing this is a literature study of research results that have been published. This study aims to determine the effect of using GeoGebra in optimizing the ability to think computationally. Computational thinking skills are defined as mental activities to abstract problems and formulate solutions to these problems that can be automated. Based on the results of the research above, it can be concluded that students can work on questions by utilizing Geogebra Software seriously and enthusiastically in the learning process, and students can also find their own solutions to problems with the help of Geogebra software.

Keywords: Learning, Technology, GeoGebra, Computational Thinking

Analysis of Joyfull Learning to a Growth Mindset in Learning Mathematics

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Abstract

The development of education is influenced by the quality of the generation of education itself. Learning activities greatly affect the functioning of materials presented primarily in mathematical learning. Some cases were found that students lose learning motivation and have poor mindset on math and assume math is difficult. The effect of a mindset is essential for effective lifelong learning so that good mindset developments need to sustain learners success in understanding concepts and materials. Mindset of mathematics is an approach to mathematical learning that believes the mindset is more important than the initial ability to determine the progress of learners understanding. The student with a growth mindset of beliefs have limits about their abilities and will link success in learning factors beyond their control. Perceived less effective learning activities are influenced by the methods used in learning mathematics. Joyfull learning methods support enjoyable learning concepts by using game methods can give a pleasant and stimulating atmosphere of learning and can be shelved

Keywords: *growth mindset, joyfull learning, mathematics learning*

Probabilistic thinking in Learning Mathematics : What, Why, How?

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Abstract

Probabilistic thinking may still be foreign to some people, but it is normal for some people. Someone who understands probabilistic not only understands theory but is also able to use it in solving problems in everyday life. But is probabilistic thinking that simple? Why is it such an important part of society today? How does mathematics education facilitate and develop these abilities? This paper tries to answer this question.

Keywords: probabilistic thinking

Strategy The Worked Example Effect in mathematics learning for minimize Germane Cognitive Load

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Abstract

This research aims to describe problem solving in mathematics learning which cannot be separated from the cognitive load processed by students. Students who do not have sufficient prior knowledge experience problems in cognitive content. Problem-solving-based learning must be taught in mathematics learning because problem solving is the core of mathematics learning. Based on these problems, a learning strategy is needed to reduce cognitive load. In the learning process, mathematics teachers need to know how to develop and design strategies to create effective learning. Learning strategies that are later expected to minimize students' Cognitive Load, especially Germane's Cognitive Load. A successful example is a problem-solving learning strategy which is very effective in minimizing students' cognitive load. effectiveness of successful learning strategies example review of problem solving abilities and cognitive load

Keywords : *Worked Example Effect, mathematics learning, Germane Cognitive Load*

Applying Differentiation Instruction in the Mathematics Classroom: Strategies for Personalized Learning

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Abstract.

Mathematics education has undergone a paradigm shift from a "one-size-fits-all" model towards a more personalized differentiated approach. Differentiated instruction recognizes students' individual differences in learning styles, levels of understanding, interests, and speed of comprehension. Teachers need to pay attention to students' learning styles, such as visual, auditory, and kinesthetic, and manage students' level of understanding through preevaluation, material adjustment, study groups, and additional support. Students' interests and interests should also be considered by showing the relevance of mathematics to the real world, connecting materials to students' personal interests, and providing a variety of materials and activities. In addition, managing students' individual progress involves initial evaluation, flexible grouping, differentiated learning plans, monitoring progress, and providing appropriate challenge and support. By applying the differentiation approach, it is expected that students can build a solid understanding of mathematics and achieve success in learning.

Keywords: *Approach, differentiation, learning style, level of understanding*

Problem Based Learning (PBL) Ethnomathematics Through Mathematical Motivation to Improve the Ability to Think Creatively Mathematically

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Abstract

Problem Based Learning (PBL) is a learning model in which students are involved in trying to solve problems by going through several stages of the scientific method so that students are expected to be able to learn knowledge related to these problems and at the same time students are expected to have skills in solving implementation problems. Ethnomatematics is a model of a mathematical approach in a cultural perspective in which this model of a mathematical approach uses culture as its learning medium. PBL as a process for students to be able to think creatively, that learning mathematics is not only driven by modules, but mathematics can be used as material for collaboration to make it easier to understand the material. Therefore it is necessary to have innovative and dynamic efforts so that the concept of learning mathematics can be conveyed properly. Judging from some of the data contained in PISA, the Global Creativity Index (CGI) and TIMMS (Trends in International Mathematics and Science Study) that the level of creative thinking of students in Indonesia is still relatively low. The purpose of this article is to improve students' mathematical creative thinking skills through batik motifs that have ethnomathematic nuances and maximize students' ability to learn mathematics, especially in the matter of number patterns. With this article it is hoped that it can provide theoretical benefits for educators in the implementation of ethnomathematics-based learning. There are many things that educators can try to provide innovative approaches to increase student understanding, one of which is through a cultural approach. This article was made using the literature study method in which data was taken from journals, articles, research reports, internet sites and others that are relevant to the problem-based learning (PBL) model with ethnomathematics nuances. With PBL students also get an interesting, broad, and meaningful learning experience, thus enabling the enthusiasm for learning which leads to an increase in students' mathematical communication skills.

Keywords: *PBL, ethnomathematics, creative thinking*

Ethnomatscience Exploration The Tradition of Spreading Apem Ya Qowiyyu Jatinom Klaten

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Abstract

Improving the quality of education is inseparable from the role of the teacher. Especially in providing motivation and the learning process to students. Moreover, in early 2020 the world was shocked by the outbreak of the Covid-19 virus. This has an impact on education in Indonesia, where learning has been carried out for approximately two years online. But currently, learning in Indonesia is in a transition period from online to offline learning. This transition period also has an influence on learning mathematics and science, both teachers and students. Even in teaching until now the teacher still uses simple and unvaried methods, only using conventional methods which make students bored and bored. Based on these conditions, it is necessary to have a learning approach. One of them is a contextual learning approach, so as to be able to create a meaningful atmosphere for learning mathematics and science as in everyday life (Herlina, 2020). Traditional culture is a real form found in everyday life and can be used for contextual learning concepts. The aim of this research is to explore the concept of ethnoscience contained in the Spread Apem Ya Qowiyyu Tradition. This research is a descriptive study with an ethnographic approach, namely describing and analyzing cultural heritage. Based on the results of observations and literature studies, it was obtained several mathematical and scientific concepts contained in parts of the Sebar Apem Ya Qowiyyu Tradition which are displayed in matrix form.

Keywords: *Ethnomatscience, ethnomathematics, ethnoscience, The Tradition of Spreading Apem Ya Qowiyyu*

Exploration of Ethnomatscience in Sonobudoyo Museum Yogyakarta and Implication in Mathematics and Science Learning

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Abstract

International assessments by the Organization for Economic Cooperation and Development (OECD) related to mathematics, science, and reading literacy in the 2018 Programme for International Student Assessment (PISA) score placed Indonesia 70th out of 78 countries. This shows that Indonesian students' ability to solve math and science problems that require research, reasoning, and effective communication, as well as the ability to solve and interpret problems in various situations is still very low. The characteristics of the Merdeka Curriculum are project-based learning, focus on essential material, and flexibility for teachers to carry out differentiated learning. One of the approaches that implement the Merdeka Curriculum is a contextual approach, namely the learning process of mathematics and science that is related to culture, also known as ethnomathscience. This study aims to explore the concept of ethnomatscience contained in Sonobudoyo Museum and the implications for learning math and science. This research is descriptive research with an ethnographic approach. Based on the results of observations and literature studies, several concepts of mathematics and science are found in the collection objects at Sonobudoyo Museum. The concepts of mathematics and science contained in the collection objects at Sonobudoyo Museum include counting, measuring, shapes such as pentagon, square, rectangle and others, as well as materials used for making batik, preserved flora and fauna, friction force, the concept of parabolic motion on catapults, the concept of circular motion on tops, and various other concepts. ethnomatscience concepts contained in Sonobudoyo Yogyakarta Museum can be used as learning math and science in schools in the form of learning media and text books.

Keywords: Etnomatscience, ethnomathematics, ethnoscience, Sonobudoyo Museum

Exploring the Effectiveness of Game-Based Learning in Developing Numeracy Skills among Elementary School Students

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Abstract

Game-Based Learning is a instructional approach characterized by implementing the learning process through play. Game-based learning goes beyond merely creating games for students to play; it involves designing gradual learning activities that introduce concepts and guide students towards the ultimate goal. According to Geiger, Good, and Forgasz (2015), numeracy is a term commonly used to identify the knowledge and skills needed to accommodate the demands of mathematics in personal and social life, as well as to participate in society as informed, reflective, and contributing citizens. Indonesia is a country that participates in the Programme for International Student Assessment (PISA), a study of mathematical numeracy among students. However, based on the regular PISA assessments conducted every three years, the mathematical numeracy skills of Indonesian students are still very low. Lecturebased teaching methods often come across as monotonous and lack challenges for students. Hence, there is a need for learning approaches that engage students in collaborative problem-solving within an interesting learning context. This study aims to enhance numeracy skills among students at SDN Penjalin in Kendal Regency using the Game-Based Learning teaching method. The method employed in this research is the Clustered Sampling with Pretest-Posttest Design. Based on the data analysis results, it has been found that Game-Based Learning is effective in improving the numeracy skills of elementary school students.

Keywords: Game-Based Learning, Numeracy.

Analysis Of Students' Pseudo Thinking In Solving Mathematics Problems In Flat Built Materials

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Abstract

The research has a goal to find out how to think artificially in solving mathematical problems, namely data building materials. The method applied in this research is descriptive qualitative. The research subjects were junior high school students using purposive sampling technique. Students were divided into 3 groups, namely long range, medium rank and high rank. Each ranking selected 10 students at respondents. So the total number of respondents is 30 respondents. Data collection techniques using tests, interviews, and documentation. From the research results, it was obtained: 1) Student with the lowest ranking in solving math problems experienced pseudo-analytic or pseudo-incorrect 2) Students with moderate ranking also experienced pseudo-analytic or pseudo-incorrect 3) Student with high ranking experienced pseudo-analytic or pseudo-false 4) Students who experience pseudo-thinking prefer to use independent reasoning procedures, and believe it to be a correct understanding, so there is no more effort to assess assigned tasks, he has done it.

Keywords: Students' Pseudo Thinking, Solving Mathematics Problems, Flat Built Materials

Developing Resilience In Mathematics Education: A Conceptual Framework

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Abstract

The research aims to develop a conceptual framework in developing resilience in mathematics education. This research was conducted using a qualitative approach through literature study. The result of literature studies show that resilience in mathematics education can be developed through three dimensions, namely the cognitive dimension, the affective dimension, and behavioral dimension. The cognitive dimension includes student ability to overcome difficulties in understanding mathematical concepts, develop logical and analytical thinking skills. The affective dimension includes students ability to manage emotions and stress that arise when learning mathematics, developing confidence in learning mathematics, and developing motivation to learn mathematics. The behavioral dimension includes students ability to develop a positive attitude towards mathematics, develop the ability to work together in groups, and develop the ability to take responsibility for mathematics learning outcomes. Based on the result of literature studies, a conceptual framework is proposed in developing resilience in mathematics education. The conceptual framework includes three main components, namely meaningful mathematics learning, supportive learning environments, and resilience development strategies. Meaningful math learning can help students develop confidence and motivation in learning maths. Resilience development strategies, anger management strategies, and cooperative learning strategies. Actions that must be taken by an educator so that student resilience can be increased are facilitating discussion and reflection, modelling or showing resilience, encouraging independence, practicing problem-solving skills, building social connections and emotional support.

Keywords : *Developing Resilience, Mathematics Education*

Class : Class 2
Moderator : Ika Tri Susilowati, M.Pd
Topic (Section) : Islamic Education (Offline)

No	Name	Article Title	Institution
1	Yanti; Aida Hayani	Islam as Rahmatan Lil Alamin Forming Islamic Morality Millennial Generatio	Alma Ata University, Indonesia
2	Yulianto Nur Cahyono; Aida Hayani	The Importance of Character Education for Young Generation in the Digital Age	Alma Ata University, Indonesia
3	Yulikha Shobaroehmi Ishar, Aida Hayani	Basics of Islamic Education	Alma Ata University, Indonesia
4	Ghina Saniawati Ahmad	The Concept of Manners Education in Facing Educational Challenges in the Era of Society 5.0	Alma Ata University, Indonesia
5	Dyah Rufiandri	Internalizing The Basis Of Islamic Religious Education According To Surah Luqman For Autistic Children Through A Social Learning Theory Approach	Alma Ata University, Indonesia

Islam as Rahmatan Lil Alamin Forming Islamic Morality Millennial Generatio

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Abstract

Islam as a religion of mercy for all creation (rahmatan lil 'alamin) exists within society with great gentleness, capable of manifesting peace and tranquility for humanity and the entire universe, serving as a driving force to aid and guide the millennial generation in forming Islamic morality. Amidst the rapid advancements in time and technology, particularly among the millennial generation, many positive aspects related to morality seem to have been overlooked. However, upon revisiting the concept of Islam as a mercy for all creation (rahmatan lil 'alamin), it can serve as a reference for acting in accordance with the principles set forth by the religion. This research analyzes how Islam, as a mercy for all creation (rahmatan lil 'alamin), shapes the moral values of the millennial generation amidst the ongoing progression of time and technology. The methodology employed in this research involves a literature review and analysis of scholarly references related to Islam as a mercy for all creation (rahmatan lil 'alamin) in forming the Islamic morality of the millennial generation. The aim of this study is to discover the concepts and values of Islam as a mercy for all creation (rahmatan lil 'alamin), particularly in shaping the moral values of the millennial generation and creating virtuous youth. The results of this research demonstrate the presence of Islamic values as a mercy for all creation (rahmatan lil 'alamin) among the millennial generation. This is evident in their awareness of the connection between religion and morality, such as displaying care and compassion towards others, showing love and kindness to all living beings, respecting others, practicing tolerance, and more. These values align with the definition of Islam as a religion that emerges as a source of peace, tranquility, and gentleness for the entire universe.

Keywords: Islam, Rahmatan lil 'alamin, Morality, Millennial Generation

The Importance of Character Education for Young Generation in the Digital Age

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Abstract

Education is an effort to improve the quality of human resources who have character and can live independently better. Quality education can form a civilized person so as to create a moral social life. Character education is a process of applying moral and religious values through science, applying these values to oneself, others, and the surrounding environment as well as to God Almighty. The demand for education to produce quality human resources continues to be echoed so that all people have awareness that education is important in this digital era. In this digital era, the use of technology properly makes it the main key in the character values of students. And what becomes a decline in morale, lack of knowledge, even character in students is due to deviations in the use of technology and the internet. This research discusses the importance of character education in building the morale of the young generation in this digital era to become a generation that has good morals. To achieve the objectives of this study, the authors took primary data sources through a search of the literature, then discussed in depth and analyzed using content analysis techniques to produce conclusions. The results of this study indicate that character education has a very important urgency to educate and nurture the younger generation so that they can make good use of technology by choosing which things are good and which are bad from the internet. With awareness of the importance of character education in the digital era, it is hoped that the successors of the Indonesian nation will be better in the future.

Keywords: *Character Education, Young Generation, Digital Era*

Basics of Islamic Education

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Abstract

At present, it has been widely recognized that Islamic education has concepts and solutions in realizing educational ideals. The concepts that underlie Islamic education are; Al-Qur'an, Sunnah and Ijtihad as well as education in an Islamic perspective includes three concepts, namely: (1) The concept of Ta'lim; educational process that leads to cognitive aspects, by developing students' skills, (2) the concept of tarbiyah; teaching process to develop and foster which includes cognitive, affective and psychomotor. (3) Ta'dib concept; education that emphasizes affective aspects, so that it can form individuals who believe and do good deeds. In Islamic education students must be able to develop their abilities in the cognitive, affective and psychomotor domains and there must be a balance between these three domains, in order to realize a pious and pious personality and live life as a human being. According to Aida Hayani, the support for learning to improve higher thinking is through contextual and meaningful learning. This research aims to examine the basic concepts of Islamic education in responding to social dynamics, to realize the noble ideals of education. This paper is in the form of qualitative research using the library research method. The results of this paper show that the basic concept of Islamic education is the most basic foundation that is solutive and complex in realizing educational ideals. The conclusion of this research is that educational ideals will be realized if the basic concepts of Islamic education are implemented covering all aspects.

Keywords: Basic Concepts, Islamic Education, Ta'lim, Tarbiyah, Ta'dib

The Concept of Manners Education in Facing Educational Challenges in the Era of Society 5.0

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Abstract

Technological advances increasingly surround human life. especially in the era of society 5.0 where technology is becoming increasingly sophisticated and has an increasingly large role in supporting everyday life. Likewise in the world of education, technological sophistication has almost replaced the role of teachers, especially with the emergence of AI programs. However, one principle in education that cannot be replaced by technological sophistication is the role of education in shaping the morals and manners of students.

Keywords : Manners Education, Facing Educational Challenges

Internalizing The Basis Of Islamic Religious Education According To Surah Luqman For Autistic Children Through A Social Learning Theory Approach

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Abstract

Getting an education is the right of every citizen, without exception. Every child regardless of family economic status, mental and physical limitations also has the right to a proper education. This includes autistic children whose numbers are increasing. The expectation of parents with autistic children in education is to be able to learn independently and receive good religious education, so that they can properly socialize. Referring to the three concepts of child education in surah Luqman verses 13-19, namely: 1) Education of Tauhid (faith), 2) Moral Education, and 3) Worship Education. The educational values contained in surah Luqman/31: 13-19 are: 1) Education with love 2) Continuous education 3) Filial piety to parents in terms of goodness, 4) The order to establish prayer, 5) Amar ma'ruf nahi munkar, 6) Always be patient in all trials, 7) Prohibition of being arrogant, 8) Simple in walking and lowering the voice when speaking. An inherent feature of autism is impaired social interaction and communication. This social interaction and communication disorder is the basis for this research. An approach is needed to overcome social interaction and communication disorders so that autistic children can be given learning about Islam. Learning theory approach Albert Bandura's social learning theory approach allows autistic children to imitate behavior (imitation) and model behavior (modeling).

Keywords: Internalization, Basic Islamic Education, Learning Theory

Class : Class 3
Moderator : Yusinta Dwi Ariyani,M.Pd.
Topic (Section) : Elementary Education (Offline)

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2	Shintia Dwi Agustina; An- Nisa Apriani; Maurentirta Wijayanti; Iqlima Tsalatsa Riana; Surya Darma Winata	Local Cultural Integration in Thematic Learning Through Drawing Batik Activities at Sdn Brajan	Alma Ata University, Indonesia
3	Sintiya Rizki Aisah; An-Nisa Apriani; Ulfaizza Rara Dwi Astuti; Siti Nurul Komariyah; Saptani Rahmafatin Gifari.	Implementation of the Local Cultural Wisdom Program Through Traditional Foods Market Day Activities at Sd Keputran 1 Yogyakarta	Alma Ata University, Indonesia
4	Ervina Wijayanti; Muniroh Dzakiyah; Risa Tianingsih; Kiranti Septiana; Galih Albara Shidiq	Meta Analysis of the Effectiveness of Using Digital Educational Game Media in Mathematics Learning to Improve Student Learning Outcomes in Elementery School	Alma Ata University, Indonesia
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6	Nur Auliyana; Firnanda Rizka Nadia; Ika Nur Aisyah; Kefin Sukma Yudha	Implementation Of Independent Curriculum MI Tahfidz Al Fatimiyah	Alma Ata University, Indonesia
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8	Rani Karlina	Moral Development Model in Elementary School	Alma Ata University, Indonesia

Local wisdom in primary school: students' perception of the kampung dolanan values

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Abstract

Implementation of Kampung Dolanan Local Wisdom at SD 2 Wojo. This article aims to implement the implementation of village local wisdom dolanan so that students have the skills (skills) in applying cultural learning in elementary schools. The research method used in this article is a qualitative research method, namely interviews. Studying local culture or regional culture is very much emphasized in character student. And the independent curriculum also has a very Pancasila profile emphasized on the character of each student and students are also taught local wisdom. This local wisdom aims for students to understand and understand the environment kampung dolanan even the surrounding community. So this school did visit to dolanan village to hone students' skills in making pottery according to the interests and abilities of each. Skills making crafts aims to teach from an early age the meaning of local culture itself so that these students love the culture of their own country. Another factor that supports this activity is that Kampung Dolanan is very close with the school, this school explores village dolanan activities can generate positive activities. Apart from this village learning dolanan aims to train students to know their identity and hone the skills he has. In local wisdom activities, students introduced to its products such as cutting board illustrated with batik patterns adjusted to the interests of each individual student. Because lack of human resources in local wisdom, the school will bring student guardians to become a tutor in kampung dolanan activities. Village local wisdom dolanan can be implemented in the subject matter of sbdp (arts and culture and crafts). This class 1 makes creativity in the form of batik cutting boards and for pottery made by high class.

Keywords: local wisdom, kampung dolanan, sbdp content, elementary school.

Local Cultural Integration in Thematic Learning Through Drawing Batik Activities at SDN Brajan

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Abstract

Globalization has had a major influence on education, one of which is in terms of culture. There have been many changes in the cultural value system, where initially students used to be interested in preserving local culture, but now they have changed to follow foreign cultures. To overcome this cultural crisis, elementary schools need to implement local culture-based learning. This study aims to describe the implementation of local culture in grade 3 at SDN Brajan Yogyakarta in thematic learning through batik drawing activities. This research approach is qualitative with a descriptive research type. The research subjects consist of school principals, teachers, and students. The object of this research is a learning process that is integrated with local culture. Data collection techniques used in this study are observation, interviews, and documentation. The data were then analyzed using the Miles and Huberman model which included data reduction, data presentation, and conclusions. The results of the study show that local culture-based learning is integrated through three steps, namely planning, implementation, and evaluation. Planning includes preparing thematic lessons, selecting batik sketches, and preparing facilities and infrastructure. Implementation is carried out through thematic learning activities carried out by designing patterns, drawing batik sketches, and coloring pictures. Evaluation is carried out through student evaluation which includes learning evaluation and attitude observation. The findings of this study indicate that the application of local culture at SDN Brajan can grow and preserve culture so that students remain moral, cultured and have creativity.

Keywords: local culture, batik, thematic, elementary school learning.

Implementation of the Local Cultural Wisdom Program through Traditional Foods Market Day Activities at SD Keputran 1 Yogyakarta

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Abstract

Schools as educational institutions can realize the functions and objectives of national education in transforming local culture. An instance of this transformation within the school is seen in Market Day activities. The market day serves as a means to safeguard and advance local culture, mainly through traditional foods. This study aims to describe the implementation of conventional food market day activities at SD Keputran 1, Yogyakarta. The research approach is qualitative with a descriptive research type. The research subjects consisted of school principals and teachers. The object of research is traditional food market day activities. Data collection techniques comprise observation, interview, and documentation. The collected data were analyzed using techniques for data collection, reduction, presentation, and conclusion drawing. The data's reliability was confirmed through triangulation of data sources. The research findings revealed that: (1) Planning for traditional food market day activities entails program promotion, defining implementation rules, forming groups, and arranging facilities. (2) Activities involve food processing, presentation, transactions, and report creation, seamlessly integrating with mathematics and natural sciences education. (3) Assessment is based on the degree of success achieved as per defined criteria. The findings demonstrate that traditional food market days enhance students' understanding of Indonesian cultural diversity, especially regarding conventional foods, and foster improved numeracy, teamwork, and entrepreneurial skills.

Keywords: local cultural wisdom, market day, traditional foods

Analysis of the Effectiveness of Using Digital Educational Game Media in Mathematics Learning to Improve Student Learning Outcomes in Elementary School

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Abstract

Education plays an important role in shaping the future of the younger generation. With the existence of education, it is able to improve the quality of knowledgeable human resources, as well as personal development and the ability of skills needed in achieving success in life. Educational Game is one of the creative and innovative learning media that can be used in learning Mathematics. This study aims to examine and explore the application of educational games in learning mathematics to improve learning outcomes in elementary school students. The method used in this research is a systematic literature study in accordance with the discussion, namely educational games, math learning, and learning outcomes. Based on the results of a systematic literature review, educational games for learning mathematics can be said to be effective and able to improve student learning outcomes quite well. In addition, the use of educational game media is also able to increase student learning motivation and students can learn more fun.

Keywords: Math Learning, Educational Game, Learning Outcomes, Elementary School

The Use Of Letter Puzzle Media In Improving Reading Ability Among Elementary School Students In Lower Grades At State Elementary School 02 Banglarangan

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Abstract

This research aimed to enhance the reading abilities of elementary school lower-grade students through the utilization of letter puzzle media at SD Negeri 02 Banglarangan. The method employed in this study was the classroom action research method, based on the issues faced by the lower-grade teachers at State Elementary School 02 Banglarangan. The research was conducted from March to June 2023. The results of this study showed an increase in students' reading skills seen from pre-cycle data which showed only 62.7% of low grade students had good reading skills, but after cycle 1 it increased to 74.4% of low grade students who had good reading skills. In cycle 2 it increased again so that 90.6% of low grade students had good reading skills. Based on this data, it can be said that the use of letter puzzle media can improve reading skills in low grade students. Through applying letter puzzle media, students found it easier to recognize letters, construct words, and read. Additionally, students exhibited heightened enthusiasm and motivation due to the media's engaging, colorful, illustrated, and tactile nature. This hands-on approach allowed students to engage directly in learning.

Keywords: Media, Letter Puzzle, Reading Abilities

Implementation Of Independent Curriculum MI Tahfidz Al Fatimiyah

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Abstract

The curriculum is a set of rules that include objectives, content, and lesson materials as a guideline for organizing class activities and aims to be the foundation for every teacher in implementing teaching and learning guideline. The implementation of the independent curriculum has been carried out in schools in Indonesia in the 2022/2023 school year. The study aims to find out how the implementation of the merdeka curriculum, what obstacles are faced and how to overcome the obstacle that occur at MI Tahfidz Al Fatimiyah. The method used in this research is qualitative. Data in the study were collected through interviews, observation, documentation. The results of this study are that MI Tahfidz Al Fatimiyah has implemented an independent curriculum in terms of making teaching modules, the practice of reinforcing Pancasila student profiles has not been implemented but carrying out activities that resembles project activities in the form of crafts and implementation of science learning. The obstacle experienced were constrained by facilities and infrastructure in procuring equipment and materials for the project. Try to overcome the obstacles that arise by searching for information on the internet or digital platforms, choosing projects that are easy to find.

Keywords: *independent curriculum, science learning, Pancasila student profile*

The Influence of the SAS (Structural Analytical Synthesis) Method on the Beginning Reading Skills of Grade 1 Students at MI Al Islamiyah Gandekan

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Abstract

This study aims to: 1) Apply the operational steps of the SAS (Structural Analytical Synthesis) method to the beginning reading skills of grade 1 students at MI AL Islamiyah Gandekan, 2) find out how much influence the use of the SAS (Structural Analytical Synthesis) method has on beginning reading skills 1st grade students at MI AL Islamiyah Gandekan.

The research method used is experimental in the form of Quasi Experimental Design type Nonequivalent Control Group Design. The subjects of this study were class I A as the control class and 1 B as the experimental class. The research location is at MI Al Islamiyah Gandekan. Data collection using pretest-posttest and observation. The data analysis technique used is the normality test, homogeneity test, and the Independent Sample t-test. The results showed that: 1) The application of the SAS learning method in class I went according to the lesson plan with the steps for implementing the SAS method as follows: a) The teacher gave questions to students to see to what extent students were able to read and remember letters, words, syllables words and sentences, b) The teacher explains the meanings of sentences, words, syllables, and letters on the picture sentence cards on the blackboard. Then the teacher explains the process of analysis using the SAS method, c) Students follow the teacher in analyzing simple sentences, starting from breaking down sentences into words and then breaking down words into syllables, then syllables are broken down into letters and repeated again until they become sentences as before, d) Students work on worksheets using the SAS method, e) The teacher guides students in making conclusions on the learning that has been implemented. 2) The SAS (Structural Analytical Synthesis) learning method influences the beginning reading skills of first grade students at MI Al Islamiyah Gandekan. From the results of data analysis, there is a correlation between the variables of the SAS method and the variables of students' beginning reading skills, namely the t-test results obtained asymp sig values. (2-tailed) $0.006 < 0.05$ means that it is significantly different, then H_0 is rejected and H_a is accepted. The average value obtained by the experimental class is greater than that of the control class, namely 65.04 and 55.04. As for the N-gain score of 0.3, it is included in the low category, where there is an influence in improving students' initial reading skills with a low increase for each student, but the use of the SAS method has a greater increase than the use of the lecture method with an N-gain score of 0,1. So the use of the SAS method has an effect on the beginning reading skills of grade I students at MI Al Islamiyah Gandekan.

Keywords: SAS Method, Beginning Reading Skills

Moral Development Model In Elementary School

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Abstract

The current moral and moral condition of adolescents can be said to be alarming. This is evidenced by the rampant behavior of teenagers that reflects their low morals and ethics. This condition is reflected in inappropriate content that is increasingly circulating widely and freely on social media. The content that is spread freely in social media such as YouTube, Instagram and Tik Tok, which seems to be too free and out of bounds, is very concerning and illustrates how the current moral and moral conditions of adolescents need attention. Therefore, the researcher compiled this article with a purpose to find out how moral guidance for teenagers, especially children in elementary schools. This research uses a descriptive qualitative method in which the data collection technique uses a literature study, namely by collecting library data, reading and analyzing research materials. Abdullah Nasikh Ulwan said there are several models of moral development that are effectively applied in elementary schools, among others: through role models, giving advice, giving special attention, getting used to children doing good, and giving punishment. Based on the analysis of the methods of fostering student morals in elementary schools, it is recommended that education organizers in schools should implement the models that have been described by coordinating with various parties, especially parents. For school principals, to hold programs that support the moral development of students in elementary schools.

Keywords: Digital Era, Moral Development, Elementary School

