



**Kampus  
Merdeka**  
INDONESIA JAYA



## **ICERI in conjunction with INTERCOME and APNME**

The 9<sup>th</sup> International Conference on Education Research and Innovation,  
2<sup>th</sup> International Conference on Music Education Community  
and The Asia Pasific Network for Moral Education

# **PROGRAM BOOK**

**STRENGTHENING EDUCATIONAL RESEARCH AND INNOVATION  
BASED ON MORALS, SCIENCES, AND ARTS  
IN NEW NORMAL ERA (PANDEMIC COVID ERA)**

**November 10-11, 2021**

**Lembaga Penelitian dan Pengabdian kepada Masyarakat  
Universitas Negeri Yogyakarta  
2021**



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ICERI

INTERNATIONAL CONFERENCE ON MUSIC EDUCATION COMMUNITY 2018  
Intercome



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## Message From The Rector of Yogyakarta State University

Assalamu'alaikum warahmatullah wabarakatuh.

May peace and God's blessings be upon you all.

Welcome to Yogyakarta, Indonesia!

It is a great honor and pleasure for me to welcome you all to The 9th International Conference on Education Research and Innovation, 2th International Conference on Music Education Community and The Asia Pasific Network for Moral Education, organized by Universitas Negeri Yogyakarta in collaboration with the APNME. On behalf of Yogyakarta State University and the committee, let me extend my warmest greetings and appreciation to all speakers and participants who have attended this conference. It is my strong belief that your presence has been due to the blessings granted by God the Almighty and the Most Merciful to Whom we without any further due have to express our gratitude and praise. It is indeed a privilege for Yogyakarta State University to have the opportunity to organise this very important conference in which educational researchers and practitioners get together to share ideas, experiences, expectations, and research findings.

The universe and society, both macro and micro, were created based on the laws of order which in principle have something in common. For example, the Milky Way solar system in which the center of the solar system is the sun, is surrounded by planets in its orbit. These planets, like Earth, are surrounded by their moons. It turns out that even very small objects such as atomic molecules have a circular model. The aims of research is to find these regularities to facilitate and improve the quality of life.

The advancement of science and technology, sport, languages and arts are dedicated not only to facilitate the human life but also educate human being themselves. Arts is the highest achievement that contain values of life that highly respected by a nation. It can be said that arts are the reflection of the civilization including moral, and vise versa; civilization as the representation of the advancement of moral, science, technology, cultures, languages, and arts by human being.

The viruses that cause the Covid 19 pandemic are hard to anticipate. Everything must be changed. This means that it is necessary to strive for innovative methods to strengthen educational research and innovation based on moral, sciences, and art in the new era.

In response to this, in First of all, on behalf of the committee, I am honored and delighted to welcome you most cordially allow me to extend my warmest greetings and welcome to The 9th International Conference on Education Research and Innovation, 2th International Conference on Music Education Community and The Asia Pasific Network for Moral Education, organized by Universitas Negeri Yogyakarta in collaboration with the APNME. The conference is virtually held for two days – November 10 and 11, 2021 due to the condition of the pandemic Covid-19 which does not allow us to meet face to face. It is held under the umbrella theme of Strengthening Educational Research and Innovation Based on Morals, Sciences, and Arts in New Normal Era (Pandemic Covid Era)". Topics on improving the quality of educational research and innovation in the industrialization era in the 21st century will be discussed. Various findings of research on education and applied research will be presented in this event by academics, researchers, practitioners, bureaucrats, teachers, and university students. This forum is expected to contribute innovative thoughts and proactive strategies to improve the society' life systematically and sustainably as the proofs of the findings of more qualified educational research and innovation.



To conclude, let me wish you a fruitful discussion during the conference

Wassalamu'alaikum warrahmatullah wabarakatuh. May peace and God's blessings be upon you all.

Yogyakarta, November 10, 2021

Rector of Universitas Negeri Yogyakarta,

Prof. Dr. Sumaryanto, M.Kes., AIFO



## Remarks By The Conference Chair

Assalamu'alaikum warrahmatullah wabarakatuh.

May peace and God's blessings be upon you all.

First of all, on behalf of the committee, I am honored and delighted to welcome you most cordially allow me to extend my warmest greetings and welcome to the The 9th International Conference on Education Research and Innovation, 2th International Conference on Music Education Community and The Asia Pasific Network for Moral Education, organized by Universitas Negeri Yogyakarta in collaboration with the APNME. The conference is virtually held for two days – November 10 and 11, 2021 due to the condition of the pandemic Covid-19 which does not allow us to meet face to face.

It is with great pride, pleasure and honour that we have been successful in organizing this International Conference in a challenging situation of the Covid-19. With the support of the university, speakers, and many other parties, the organising committee has collectively made this event a reality.

This year "Strengthening Educational Research and Innovation Based on Morals, Sciences, and Arts In New Normal Era (Pandemic Covid Era)" is raised as the conference theme. The theme is raised to to strive for innovative methods to strengthen educational research and innovation based on moral, sciences, and art in the new era.

For your information, we proudly present one keynote speech, three plenary presentation sessions and three parallel presentation sessions. Prof. Dr. Margana, M.Hum.,M.A. speaks as the keynote speaker. Five outstanding speakers in their fields have been invited. They are Hilmar Farid, Ph.D. & Assc. Prof. Alex Ruthmann, Ph.D. (Directorate General of Culture of the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia), Dr. Marlne Belly (Universite de Poitiers, France), Ass. Prof. Alex Ruthmann, Ph.D. (USA), Prof. Meiyao Wu, Ph.D., (National Kaohsiung Normal University, Taiwan), Yan Huo, Ph.D., (Tsinghua University, China), and Prof. Ji Young Choi, Ph.D. (Hannam University, Korea)

We have done our best to prepare this conference. So, my highest appreciation and heartfelt thanks go to all committee members. As to err is human, shortcomings may occur here and there. On behalf of the committee, I would therefore like you all to accept our apologies.

To conclude, let me wish you a productive discussion and a fruitful conference.

Wassalamu'alaikum warrahmatullah wabarakatuh.

May peace and God's blessings be upon you all.

Yogyakarta, November 10, 2020  
Conference Chair

Prof. Dr. Samsul Hadi, M.Pd., M.T.



## Rundown

**ICERI IN CONJUNCTION WITH APNME AND INTERCOM**  
**The 9<sup>th</sup> International Conference on Education Research and Innovation**  
**The Asia-Pacific Network of Moral Education**  
**2<sup>th</sup> International Conference on Music Education Community**

TIME	AGENDA	MODERATOR
<b>Wednesday, 10 November 2021</b> Zoom: <a href="https://di.uny.ac.id/iceri2021">https://di.uny.ac.id/iceri2021</a>		
07.30 – 08.00	Registration	
08.00 – 08.30	Opening Ceremony 1. Speech by the Head of the Institute of Research and Community Service 2. Speech by the Chairperson of APNME 3. Speech and Opening by Rector 4. Prayer	MC :Nunik Sugesti, M.Hum. Prof. Dr. Samsul Hadi, M.Pd.MT.  Prof. Dr. Meiyao Wu, Ph.D. Prof. Dr. Sumaryanto, M.Kes. AIFO. Prof. Dr. Marzuki, M.Ag.
08.30 – 09.15	Keynote Speech	Prof. Dr. Margana, M.Hum.,M.A.
09.15 – 11.15	Plenary Session 1 1. Hilmar Farid, Ph.D. 2. Assoc. Prof. Alex Ruthmann, Ph.D.	Moderator: Retna Hidayah, Ph.D.
11.15 – 12.30	Break	
12.30 – 15.00	Plenary Session 2 (APNME Session) 1. Prof. Meiyao Wu, Ph.D., 2. Yan Huo, Ph.D. 3. Prof. Ji Young Choi, Ph.D.	Moderator: Christopher Drake, M.A.
15.00 – 15.30	Break	
15.30 – 17.00	Plenary Session 3 Dr. Marlene Belly	Moderator: Anita Triastuti, Ph.D. Interpreter: Alice Armini, M.Hum.
<b>Thursday, 11 November 2021</b> Zoom: <a href="https://di.uny.ac.id/iceri2021">https://di.uny.ac.id/iceri2021</a>		
07.30 – 08.00	Registration	
08.00 – 08.30	Briefing on Publication	Nila Kurniasari, M.Pd.
08.30 – 10.00	Plenary Session 4 Prof. Alex Ruthmann, Ph.D.	Moderator: Dr. Kun Setyaning Astuti, M.Pd.
10.00 – 11.30	Parallel Session 1 <b>(see parallel session group)</b>	Panitia
11.30 – 13.00	Break	
13.00 – 15.00	Parallel Session 2 <b>(see parallel session group)</b>	Panitia
15.00 – 15.30	Break	
15.30 – 17.00	Parallel Session 3 and Closing	Panitia



## Parallel Session Group

### Group 1

Scheme	PPM Berbasis Hasil Penelitian, PPM Pengembangan Wilayah
Reviewer	Dr. Sunarso, M.Si.
Notetaker	Akhmad Rofiq, S.Pd., M.Pd.
Room PIC	Anindita Ayu Nisa Utami
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok1">https://di.uny.ac.id/iceri2021-kelompok1</a>
<b>Author</b>	<b>Title</b>
1. Anita Triastuti, S.Pd., M.A., Ph.D.	PELATIHAN PENGEMBANGAN ASSESSMENT PEMBELAJARAN BERBASIS TEKS DENGAN PENDEKATAN PRINCIPLED ECLECTICISM UNTUK GURU BAHASA INGGRIS DI D.I. YOGYAKARTA
2. Dr. Drs. Fauzi, M.Si.	OPTIMALISASI PELATIHAN FISIK BERBASIS EVALUASI DENGAN METODE TES DAN PENGUKURAN
3. Dr. Drs. Saliman, M.Pd.	PELATIHAN PENULISAN KARYA TULIS ILMIAH BAGI GURU IPS MGMP DI YOGYAKARTA
4. Dra. Isroah, M.Si.	PELATIHAN PENINGKATAN SKILL LITERASI DIGITAL DAN TEKNOLOGI UNTUK MENINGKATKAN KEMAMPUAN PENGELOLAAN PEMBELAJARAN DARING BAGI GURU MGMP AKUNTANSI KABUPATEN KULON PROGO
5. Drs. Muhamad Nur Rokhman, M.Pd.	PELATIHAN PENGGUNAAN MAKET DALAM PEMBELAJARAN SEJARAH BAGI GURU-GURU SEJARAH SMK DI KABUPATEN KULON PROGO
6. Nawan Primasoni, S.Pd. KOR., M.Or.	PELATIHAN STRENGTH CONDITIONING BAGI PELATIH SEKOLAH KEBERBAKATAN OLAHRAGA DI DIY-JATENG UNTUK PENINGKATAN PRESTASI ATLET ELITE REMAJA
7. Purwanti Widhy Hastuti, S.Pd., M.Pd.	Optimalisasi Kompetensi Guru IPA dalam Pembelajaran Berbasis Inquiry (Inquiry Based Learning) di Era Pembelajaran Daring melalui Workshop Penyusunan Science e-Worksheet
8. Dr. dr. Rachmah Laksmi Ambardini, M.Kes.	Pelatihan Pengelolaan Gizi dan Pencegahan Doping Pada Pelatih dan Atlet Pustlatda DIY
9. Dr. Dra. Endang Mulyani, M.Si.	PELATIHAN PENGELOLAAN USAHA JAJAN PASAR BERBASIS KEARIFAN LOKAL GUNA MENINGKATKAN PENDAPATAN MASYARAKAT PADA ERA COVID-19 DI DESA PENGASIH
10. Dr. Or. Mansur, M.S.	BIMTEK MAINTENANCE KONDISI FISIK BERBASIS MANAJEMEN MENTAL MENUJU SUKSES PORDA DIY 2022
11. Drs. Allesius Maryanto, M.Pd.	Pelatihan Pemanfaatan Virtual Laboratory Berbasis PhET Interactive Simulations Sebagai Upaya Peningkatan Kemampuan Guru IPA dalam Menjalankan Kegiatan Praktikum di Era Belajar dari Rumah (BDR)
12. Grendi Hendrastomo, S.Sos. M.M., M.A	Peningkatan Literasi Digital dan Literasi Sosial-Ekonomi menuju Desa Tangguh Covid-19
13. Prof. Dr. Drs. Suranto, M.Pd., M.Si.	PELATIHAN PEMASARAN DIGITAL MENGGUNAKAN MARKETPLACE UNTUK MENINGKATKAN PENJUALAN ONLINE DI MASA ADAPTASI KEBIASAAN BARU
14. Sulistiyono, S.Pd., M.Pd.	PEMBENTUKAN SEKOLAH SEPAKBOLA (SSB) DALAM RANGKA OPTIMALISASI PERAN BUMDESA DALAM PENINGKATAN PENDAPATAN ASLI DESA (PAD)
15. Susilowati, S.Pd.Si., M.Pd.Si	Workshop Penyusunan Bahan Ajar Integrated Science Adaptasi NGSS (Next Generation Science Standards) yang Kontekstual dengan Covid-19 untuk Mengoptimalkan PCK (Pedagogical Content Knowledge) Guru IPA SMP di Era Teknologi Abad 21.





## Group 2

Scheme	PPM Berbasis Hasil Penelitian, PPM Pengembangan Wilayah, PPM-KKN, Program Kemitraan Masyarakat, Program Pengembangan Produk Unggulan Daerah
Reviewer	Drs. Darmono, MT.
Notetaker	Drs. Eko Widodo, M.Pd.
Room PIC	Rini Astuti, S.IP
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok2">https://di.uny.ac.id/iceri2021-kelompok2</a>
Author	Title
1. Dr. Ir. Slamet Widodo, ST.,M.T.	PERENCANAAN TAPAK KAWASAN WISATA AIR EMBUNG RINGINLARIK SEBAGAI UPAYA PENGEMBANGAN OBYEK WISATA BARU DI KABUPATEN BOYOLALI PADA ERA NEW NORMAL
2. Dr. Ir. Mujiyono, IPM, M.T.	PPM K3 5R Untuk Kelompok Usaha Pengecoran Alumunium Kecamatan Umbulharjo Yogyakarta
3. Dr. Miftahuddin, M.Hum.	PENDAMPINGAN BELAJAR KELUARGA DALAM RANGKA MEMPERINGAN PROBLEM DAN MEMPERTAHANKAN MUTU PENDIDIKAN DI MASA PANDEMI COVID-19
4. Drs. Eko Widodo, M.Pd.	Pelatihan dan pendampingan pembuatan pupuk organik dengan teknologi EM-4 di Desa Dadapayu, Kecamatan Semanu, Kabupaten Gunungkidul
5. Drs. Hiryanto, M.Si.	Pemberdayaan Perempuan melalui pelatihan dan pemanfaatan lahan pekarangan untuk budidaya sayuran dan buah-buah dalam rangka ketahanan pangan.
6. M. Lies Endarwati, SE. M.Si.	Literasi Pengembangan Usaha Bagi UMKM Pada Masa Pandemi Covid di Era Digital di Desa Bugel Panjatan Kulaonprogo D.I. Yogyakarta
7. Prof. Dr. Sudji Munadi, M.Pd.	PELATIHAN DAN PENDAMPINGAN EKSPOSISI KEKAYAAN HEWAN DAN TUMBUHAN BAGI PENGELOLA WISATA GUNUNG API PURBA NGLANGGERAN SEBAGAI SAJIAN BARU DI LOKASI WISATA
8. Agung Utama, SE., M.Si.	"Strategi Digital Marketing Dan Pengembangan Usaha Kreatif Dalam Upaya Pemulihan Ekonomi Ukm Batik Nona Lia Di Era
9. Arif Marwanto, M.Pd.	Adaptasi Kebiasaan Baru"
10. Bayu Rahmat Setiadi, S.Pd., M.Pd.	"PKM Meningkatkan Eksistensi Perempuan Pengrajin Tenun Lurik Dengan Inovasi Produk Dan Pemasaran Berbasis Sosial Media Di
11. Dr. Dyah Purwaningsih, S.Si., M.Si.	Wilayah Dusun Kembangan Kecamatan
12. Dr. Istanto Wahyu Djatmiko, M.Pd.	Moyudan Kabupaten Sleman"
13. Dr. Kun Sri Budiasih, M.Si.	PKM Waste Management System (WAMAS) Pada Kelompok Swadaya Masyarakat Desa Potorono Kabupaten Bantul
14. Dr. Risky Setiawan, S.Pd., M.Pd.	PKM Pengembangan Perangkat Pembelajaran Berbasis Technological Pedagogical And Content Knowledge (Tpack) Di Era Pandemi Covid-19 Bagi Guru IPA Dan IPS Di DIY
15. Muhfizaturrahmah, S.T., M.Eng.	Pemanfaatan Teknologi Robot Terbang Untuk Pembelajaran Dan Pemantauan Lingkungan Pesantren Hidayatullah Yogyakarta
16. Drs. Edy Purnomo, M.Pd.	PKM Pendampingan Usaha Tenun Lurik Dengan Zat Warna Alami Untuk Mendukung Produk Ecolabel Dan Pasar Digital

### Group 3

Scheme	PPM Berbasis Hasil Penelitian, PPM Kerjasama Internasional, PPM Pengembangan Wilayah
Reviewer	Prof. Dr. Drs. Suranto, M.Pd.,M.Si.
Notetaker	M. Lies Enderwati, M.Si.
Room PIC	Agus Irfanto, A.Md
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok3">https://di.uny.ac.id/iceri2021-kelompok3</a>
Author	Title
1. Dr. Apri Nuryanto, S.Pd.ST., M.T.	PPM Hasil Penelitian Briket Tectona Grandis untuk Pengembangan BUMDES Nglipar Kabupaten Gunungkidul
2. Dr. Ir. Zainal Arifin, M.T.	PKM Perakitan Prototype Electric Handcycle Wheelchair dalam meningkatkan Ketrampilan Tim Reparasi Kursiroda Komunitas Disabilitas di Provinsi DIY
3. Prof .Dr. Lantip Diat Prasajo, S.T., M.Pd.	PELATIHAN DAN PENDAMPINGAN MANAJEMEN SEKOLAH RAMAH ANAK (SRA) PADA MASA PANDEMI COVID 19 BAGI GURU-GURU SMP N 15 YOGYAKARTA
4. Dr. Asri Widowati, S.Pd.Si.,M.Pd.	PELATIHAN PEMBUATAN VIDEO PRODUKTIVITAS ANGGOTA SALIMAH TAIWAN UNTUK PENGEMBANGAN LITERASI DIGITAL
5. Dr. Komarudin, S.Pd., M.A.	FESTIVAL PERMAINAN TRADISIONAL SEBAGAI UPAYA PENGUATAN KARAKTER NASIONALISME SISWA SEKOLAH DASAR DI SEKOLAH INDONESIA KUALALUMPUR MALAYSIA
6. Dr. Rita Eka Izzaty, S.Psi., M.Si.	PENINGKATAN KETERAMPILAN PENGASUHAN PADA PEKERJA MIGRAN INDONESIA UNTUK OPTIMALISASI TUMBUH KEMBANG (KESEJAHTERAAN PSIKOLOGIS) ANAK
7. Dr. Yudik Prasetyo, S.Or., M.Kes.	PELATIHAN HOME BODY WORKOUT DAN CYBER COUNSELING BAGI REMAJA UNTUK MENJAGA KEBUGARAN JASMANI DI MASA PANDEMI COVID-19
8. Dr. Zulfi Hendri, S.Pd.,M.Sn.	Workshop Sastra Corona dan Kekriyaan Wayang untuk Meningkatkan Kemampuan Pengembangan Ekonomi Kreatif di masa Pandemi Covid-19 bagi WNI di Australia
9. Prof. Dr. Endang Mulyani, M.Si.	Pelatihan Pendidikan Kewirausahaan Berbasis Company Program Untuk Meningkatkan Mindset Kewirausahaan dan Rintisan Start Up
10. Prof. Dr. Margana, M.Hum., M.A.	THE TRAINING OF PERSONAL AND SOCIAL SKILL FOR STUDENTS OF UNIVERSITAS NEGERI YOGYAKARTA AND PUNJABI PATIALA UNIVERSITY INDIA
11. Prof. Dr. Paidi, M.Si.	PELATIHAN IMPLEMENTASI TPACK DALAM HYBRID LEARNING DI ERA NEW NORMAL BAGI DOSEN UPSI MALAYSIA
12. Prof. Dr. Siswantoyo, S.Pd.,M.Kes.	PENINGKATAN IMUNITAS DENGAN LATIHAN D'SELONJOR YOGA JAWA 515 UNTUK PERKUMPULAN PELAJAR INDONESIA DI UNIVERSITY PENDIDIKAN SULTAN IDRIS MALAYSIA MASA PANDEMI COVID19 KERJASAMA PPI UPSI MALAYSIA
13. Prof. Dr. Sugiyono, M.Pd.	TRAINING THE IMPLEMENTATION OF QUALITATIVE, QUANTITATIVE, AND R & D RESEARCH METHODS FOR STUDENTS OF YOGYAKARTA STATE UNIVERSITY (UNY) AND PUNJABI UNIVERSITY PATIALA INDIA
14. Dr. Sujarwo, M.Pd.	PELATIHAN PEMBUATAN ASESMEN DARING BERBASIS GAMIFIKASI BAGI GURU SEKOLAH DASAR DI KECAMATAN SEWON BANTUL
15. Drs. Yatin Ngadiyono, M.Pd.	PELATIHAN E-MARKETING SEBAGAI USAHA MENJAGA KETAHANAN EKONOMI MASYARAKAT PENGRAJIN TENUN LURIK DI DESA KEMBANGAN DALAM MENGHADAPI DAMPAK PANDEMI COVID 19

## Group 4

Scheme	Penelitian Pendidikan Karakter, Penelitian Unggulan Perguruan Tinggi
Reviewer	Prof. Dr. Marzuki, M.Ag.
Notetaker	Esti Swatika Sari, M.Hum.
Room PIC	Anang Ma'ruf
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok4">https://di.uny.ac.id/iceri2021-kelompok4</a>
Author	Title
1. Benni Setiawan, S.H.I., M.S.I.	Model Penguatan Pendidikan Karakter Ideal di Sekolah Dalam Pembelajaran Jarak Jauh
2. Dr. Asri Widowati, S.Pd.Si.,M.Pd.	Pengembangan E-Bahan Ajar IPA Berpendekatan Inquiry Bermuatan NoS beserta Pengaruhnya terhadap 21st century skill
3. Dr. Dra. Sri Waluyanti, M.Pd.	Peningkatan Keterampilan Kolaborasi dan Komunikasi Melalui Pembelajaran Online Berbasis Masalah dan Proyek Terpadu Pada Mata Kuliah MPP
4. Dr. Entoh Tohani, S.Pd., M.Pd.	Literasi Teknologi Informasi dan Komunikasi Pengelola Community Learning Center Dalam Pengelolaan Pendidikan Nonformal pada Masa Pandemi COVID-19
5. Dr. Rukiyati, M.Hum.	KONSTRUK KARAKTER NASIONALISME PEMUDA DI YOGYAKARTA
6. Dr. Sigit Nugroho, S.Or., M.Or	PENGARUH PERMAINAN ESPORT PADA MASA PANDEMI COVID-19 TERHADAP PEMBENTUKAN KARAKTER DAN BUDAYA OLAHRAGA
7. Esti Swatika Sari, S.Pd., M.Hum.	Aplikasi Jurnal Harian Literasi Bermuatan Critical Thinking untuk Pembiasaan Literasi Siswa
8. Ir. Suhandoyo, MS.	Implementasi Penilaian Karakter Pada Proses Pembelajaran IPA di SMP Ditinjau Dari Kultur Sekolah
9. Muniya Alteza, SE.,M Si.	Dampak Pandemi Covid-19 Terhadap Kepedulian Lingkungan, Tanggungjawab Sosial, dan Kebiasaan Konsumsi Makanan Pada Generasi-Z
10. Prof. Dr. Drs. Suwardi, M.Hum.	KARMAPALA DALAM LAKON BARATAYUDA SAJIAN KI HADI SUGITO SEBAGAI SUMBER BAHAN AJAR PENDIDIKAN KARAKTER
11. Ahmad Wahyudin, S.S., M.Hum.	Konstruksi Identitas Perempuan Indonesia dalam Komik Strip Bertema Vaksin Covid-19 di InstagramKajian Wacana Kritis
12. Dr. Ali Mustadi, M.Pd.	KESANTUNAN TINDAK TUTUR PADA KONSTRUKSI IMPERATIF DALAM BUKU TEMATIK TERPADU SEKOLAH DASAR SEBAGAI BENTUK PENGEMBANGAN MODEL PEMBELAJARAN SANTUN DI TINGKAT PENDIDIKAN DASAR
13. Dr. Else Liliani, S.S., M.Hum.	Perkembangan Genre Fiksimini di Indonesia Tahun 2010 Hingga Kini
14. Dr. Yeni Artanti, S.Pd., M.Hum.	INKLUSIVITAS DALAM SASTRA ANAK INDONESIA, INGGRIS, JERMAN, DAN PRANCIS
15. Dra. Nury Supriyanti, M.A.	Pengembangan Materi Perkuliahan Introduction to English for Children (EFC) Daring di Program Studi S1 Pendidikan Bahasa Inggris UNY
16. Prof. Dr. Drs. Suhardi, M.Pd.	PENGGUNAAN KATA UMPATAN DI MEDIA MASSA ONLINE
17. Prof. Dr. Farida Hanum, M.Si.	Pemanfaatan Waktu Luang Pemuda Indonesia di Berbagai Wilayah Tanah Air



## Group 5

Scheme	Penelitian Prototipe Industri, Penelitian Unggulan Perguruan Tinggi
Reviewer	Prof. Dr. Mutiara Nugraheni
Notetaker	Dr. Apri Nuryanto, M.T.
Room PIC	Septiana Nur Rahman
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok5">https://di.uny.ac.id/iceri2021-kelompok5</a>
Author	Title
1. Dr. Aman, M.Pd.	PENGEMBANGAN PROTOTIPE MEDIA 3D VIRTUAL STORYBOARD REALITY SEJARAH KEBUDAYAAN INDONESIA BERBASIS ANDROID
2. Dr. Apri Nuryanto, S.Pd.ST., M.T.	Prototipe Optimizing Tap Pad and Back Pad pada Wheelchair Adaptif PT. MAK untuk Line Mass Production dengan IKM di Yogyakarta
3. Dr. Drs. V. Lilik Hariyanto, M.Pd.	Rancang Bangun Sistem C-BIM (Construction based Building Information Modeling) Berbasis IoT untuk Menghasilkan Perencanaan Gedung Berkelanjutan di UNY
4. Dr. Fitri Rahmawati, M.P.	Inovasi Snack Bar Berbahan Baku Pangan Lokal Sebagai Alternatif Pemulihan Stamina Untuk Olahraga Di Masa Pandemi Covid-19
5. Dr. Ir. Heri Wibowo, ST.,MT.	Prototipe Sepeda Listrik Frame Cor untuk mengembangkan produk IKM Pececoran Logam
6. Dr. Or. Mansur, M.S.	PENGEMBANGAN SPORT EQUIPMENT TEST STATIC BALANCE 10 IN 1 BERBASIS DIGITAL UNTUK MENEROBOS INDUSTRI TEKNOLOGI OLAHRAHA UJI EFEKTIVITAS DAN NEED ASSESMENT PASAR
7. Prof. Dr. Dra. Endang Rini Sukamti, M.S.	Pengembangan Alat Multi Fungsi (F3ER-AMF) Berbasis Sensor Untuk Pemanduan Bakat, Latihan Dan Tes Fisik
8. Prof. Dr. Drs. Suranto, M.Pd.,M.Si.	Prototipe Virtual Tour Sebagai Media Informasi Wisata Dari Universitas Negeri Yogyakarta Untuk Indonesia
9. Prof. Dr. Siti Irene Astuti D, M.Si.	PENGEMBANGAN PRODUK MATERI MOOC (MASSIVE OPEN ONLINE COURSE) TEACHING CREATIVITY DALAM MENGHADAPI REVOLUSI INDUSTRI 4.0
10. Prof. Dr. Suyanta, M.Si.	PERUBAHAN FISIK DAN KIMIWI TONGKOL JAGUNG, KANGKUNG DAN JERAMI PADI MELALUI TEKNOLOGI FERMENTASI SEBAGAI BAHAN PAKAN TERNAK RUMINANSIA
11. Dr. Dra. Isana Supiah YL., M.Si.	PRODUKSI GAS HIDROGEN MELALUI ELEKTROLISIS AIR DALAM SUASANA BASA DAN BERBAGAI MEDIA (SIRIH HIJAU (PIPER BETLE) DAN MERAH (PIPER ORNATUM), ALPUKAT (PERSEA AMERICANA), SERTA PEPAYA (CARICA PAPAYA L)) DENGAN MENGGUNAKAN ELEKTRODA ELEKTROKATALIS STAINLESS STEEL/Fe-Co-Ni
12. Drs. Ir. Moch Solikin, M.Kes.	Pengembangan Media Pembelajaran Reality Motor 2 Tak Dengan 3D Print
13. Drs. Totok Heru Tri Maryadi, M.Pd.	PENGEMBANGAN TRAINER KIT VARIABLE SPEED DRIVE UNTUK MEDIA PRAKTIK KOMPETENSI KENDALI MOTOR LISTRIK PADA PENDIDIKAN VOKASI
14. Handaru Jati, ST.,M.M.,M.T.,Ph.D.	PRESENSI MAHASISWA ERA NEW NORMAL BERBASIS REAL-TIME MASK-WEARING FACE RECOGNITION DENGAN DEEP LEARNING
15. Prof. Dr. Ariswan, M.Si.	RANCANG BANGUN REAKTOR MINI BERBASIS GELOMBANG ULTRASONIK UNTUK PRODUKSI GRAPHENE SEBAGAI BAHAN DASAR ELEKTRODA TRANSPARAN
16. Suprpto, S.Pd., M.T., Ph.D.	Trainer Differensial Elektronik Pada Mobil Listrik Menggunakan Sistem Kendali Fuzzy Neural Network Harris Hawk Optimization



## Group 6

Scheme	Penelitian Unggulan Perguruan Tinggi
Reviewer	Dr. Muh. Nur Wangid
Notetaker	Dr. Tien Aminatun, M.Si.
Room PIC	Mutiara Annisa Widodo
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok6">https://di.uny.ac.id/iceri2021-kelompok6</a>
Author	Title
1. Christina Fajar Sriwahyuniati, S.Pd.,M.Or.	KAJIAN MANAJEMEN PENGELOLAAN SKO DIY UNTUK MENINGKATKAN IDENTITAS DAN PRESTASI DIY SEBAGAI KOTA PELAJAR DAN KOTA BUDAYA
2. Dr. Ahmad Nasrulloh, S.Or., M.Or	PENGEMBANGAN METODE SELF BODY WEIGHT TRAINING UNTUK MENINGKATKAN KEBUGARAN JASMANI DI MASA PANDEMI COVID 19
3. Dr. Budi Astuti, M.Si.	Pengembangan Mobile Learning tentang Pendekatan Konseling Kognitif untuk Meningkatkan Pemahaman Pendekatan Konseling bagi Mahasiswa BK FIP UNY
4. Dr. Drs. Jaka Sunardi, M.Kes.	Health Electric Wheelchair Portable IoT-Based untuk Meningkatkan Kemandirian Disabilitas Fisik
5. Dr. Erwin Setyo Kriswanto, S.Pd.,M.Kes.	Analisis Kebutuhan Pengembangan Media Pembelajaran Praktik Pendidikan Jasmani Sekolah Dasar dalam Menunjang Pelaksanaan PJJ (Distance Learning) selama Masa Pandemi Covid-19 di Kota Yogyakarta
6. Dr. Haryanto, M.Pd.	Fenomena Beban Kognitif (Cognitive Load) pada Siswa SMA se-Bantul selama Masa Pandemi
7. Dr. Ixora Sartika Mercuriani, M.Si.	Perbanyak tanaman anggrek melalui induksi tunas aksiler secara in vitro dan analisis keseragaman genetiknya
8. dr. Novita Intan Arovah, MPH., Ph.D.	UJI VALIDITAS DAN RELIABILITAS IMMUNE STATUS QUESTIONNAIRE SERTA UJI EFEKTIVITAS SELF-MASSAGE TERHADAP IMUNITAS DI ERA COVID-19
9. Dr. Nurtanio Agus Purwanto, S.Pd.,M.Pd.	KEPEMIMPINAN KEPALA SEKOLAH MENYENANGKAN DAN EFEKTIF DI SMK N 5 DAN SMK N 6 YOGYAKARTA
10. Dr. Sujarwo, M.Pd.	Ekoliterasi peningkatan kapabilitas inovasi dalam ketahanan keluarga di Era New Normal Pandemi Covid19
11. Dr. Tien Aminatun, S.Si.,M.Si.	PENGARUH MODIFIKASI HABITAT DENGAN PERLAKUAN TRAP CROP TANAMAN BERBUNGA TERHADAP VISITASI SERANGGA POLINATOR PADA PERTANAMAN CABAI
12. Dr. Yudik Prasetyo, S.Or., M.Kes.	Inovasi Software Talent Identification Cabang Olahraga Panahan Di Daerah Istimewa Yogyakarta
13. Drs. Sumarjo, M.Kes.	EFEKTIVITAS MASASE KESEHATAN UNTUK MENINGKATKAN PRODUKTIVITAS KERJA PENYANDANG DISABILITAS
14. Nawan Primasoni, S.Pd. KOR., M.Or.	Inovasi Alat Pengukur Kecepatan dan Daya tahan Sepakbola
15. Prof. Dr. Wawan Sundawan Suherman, M.Ed.	ANALISIS KURIKULUM SEBAGAI PRAKSIS PADA PENDIDIKAN JASMANI OLAHRAGA DAN KESEHATAN SEKOLAH MENENGAH PERTAMA KABUPATEN SLEMAN
16. Prof. Soni Nopembri, S.Pd., M.Pd., Ph.D.	Model Aktivitas Jasmani dan Olahraga untuk Kesiapsiagaan Remaja dalam menghadapi Bencana



## Group 7

Scheme	Penelitian Unggulan Perguruan Tinggi
Reviewer	Prof. Dr. Putu Sudira
Notetaker	Arif Wijayanto, M.Pd.
Room PIC	Nopita Sitompul
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok7">https://di.uny.ac.id/iceri2021-kelompok7</a>
Author	Title
1. Amika Wardana, S.Sos., M.A., Ph.D.	Pemetaan Sosio-Spasial Kerentanan Bencana Kota (Studi Kasus di Kota Yogyakarta)
2. Dhyah Setyorini, S.E., M.Si., Ak.	Assessing the Perceived Prevalence of Research Fraud among Faculty at Research-Intensive Universities in Yogyakarta/Indonesia Using Fraud Pentagon Theory
3. Dr. Drs. Giri Wiyono, M.T.	EFEKTIVITAS POLA BIMBINGAN KEJURUAN KELOMPOK BERBASIS DARING DI MASA PANDEMI COVID 19 TERHADAP KESIAPAN SISWA SMK MEMASUKI DUNIA KERJA
4. Dr. Ir. Suhartini, M.S.	Identifikasi Mikroorganisme pada Ekoenzim Berbasis Limbah Buah dan Sayur
5. Dr. Sutirman, S.Pd., M.Pd.	Efektivitas Aplikasi Electronic Records Information System for Education (ERISE) Sebagai Media Pembelajaran Kearsipan Pada SMK Otomatisasi dan Tata Kelola Perkantoran (OTKP)
6. Mustofa, S.Pd. .M.Sc.	Stimulus Kebijakan Fiskal di Era Pandemi Pada Negara-Negara ASEAN
7. Nur Aeni Ariyanti, SP., MP., M.Agr., Ph.D.	Eksplorasi Bakteri Endofit dari Tanaman Cabai Rawit sebagai Agen Pengendali Hayati Penyakit Antraknosa Secara In-Vitro untuk Mengurangi Penggunaan Fungisida
8. Prof. Dr. Endang Mulyatiningsih, M.Pd.	DAMPAK PENDEKATAN HEUTAGOGY TERHADAP TANGGUNGJAWAB BELAJAR DARING PADA MATA KULIAH STATISTIK
9. Prof. Dr. Hari Sutrisno, M.Si.	Analisis Energi Celah Pita dan Struktur Elektronik Perovskit Layer NaLnTiO <sub>4</sub> (Ln = Y, La, Nd) dengan Metode Pendekatan Density Functional Theory sebagai Kandidat Material Sel Surya dan Anti-Bakteri
10. Prof. Dr. Herminarto Sofyan, M.Pd.	Model Pendampingan Terintegrasi Berbasis Kinerja Bagi Guru SMK di Daerah Istimewa Yogyakarta
11. Prof. Dr. Mundilarto, M.Pd.	PENGEMBANGAN MODEL PEMBELAJARAN KOOPERATIF BERBASIS SOCIO-SCIENTIFIC ISSUES UNTUK MENUMBUHKAN SIKAP SOSIAL PESERTA DIDIK MELALUI PEMBELAJARAN FISIKA JARAK JAUH
12. Prof. Dr. Nahiyah Jaidi, M.Pd.	Model Pendampingan Bisnis UMKM Batik dan Kerajinan di Indonesia Studi Kasus UMKM Batik dan Kerajinan Binaan Balai Besar Kerajinan dan Batik Kementerian Perindustrian Republik Indonesia
13. Prof. Drs. K.H. Sugijarto, M.Sc., Ph.D.	DEVELOPING ADVANCED MATERIAL OF SPIN-CROSSOVER (SCO) IN COBALT(II) AND CHROMIUM(II) COMPLEXES OF 2,6-BIS(PYRAZOL-3-YL)PYRIDINE (BPP) AND/OR BIPYRIDINE (BIPY)
14. Prof. Setyabudi Indartono, MM., Ph.D.	PENGARUH KNOWLEDGE MANAGEMENT TERHADAP KESADARAN KESELAMATAN KARYAWAN DI PERUSAHAAN MANUFAKTUR
15. Wipasar Sunu Brams Dwardaru, S.Si., M.Sc., Ph.D.	Modifikasi Morfologi Graphene Oxide dan Fungsionalisasinya sebagai Pelapis Antibakteri yang Transparan
16. Woro Sri Hastuti, S.Pd., M.Pd.	Pengembangan Media Laboratorium Virtual Berbasis Android pada Pembelajaran Erupsi Gunung Api di Era Kenormalan Baru



## Group 8

Scheme	Penelitian Percepatan Guru Besar, Penelitian Kerja Sama Internasional LPTK LPPM se-Indonesia, Penelitian Pengembangan Unggulan Perguruan Tinggi, Penelitian Terapan
Reviewer	Prof. Dr. Sudji Munadi, M.Pd.
Notetaker	Prof. Dr. Eli Rohaeti
Room PIC	Hartaya, MT
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok8">https://di.uny.ac.id/iceri2021-kelompok8</a>
<b>Author</b>	<b>Title</b>
1. Prof. Dr. Dra. Sumaryanti, M.S.	PENGEMBANGAN MODEL LATIHAN FUN FITNESS UNTUK MENINGKATKAN KEBUGARAN OTOT PADA LANSIA DI MASA NEW NORMAL COVID 19
2. Prof. Dr. Sumaryanto, M.Kes.	Adaptasi Perubahan Hormon Atlet Lari Jarak Jauh Mahasiswa UKM Atletik Terhadap Variasi Intensitas Latihan.
3. Prof. Dr. Tomoliyus, MS.	Inovasi Program Latihan Reactive Agility Kinerja Tenis
4. Prof. Drs. Jaslin Ikhsan, M.App.Sc., Ph.D.	SINTESIS IN SITU TiO <sub>2</sub> /CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> DENGAN FILD (FUNCTIONALIZED IONIC LIQUID-DOPANT) UNTUK APLIKASI SEL SURYA PEROVSKITE
5. Drs. Sebastianus Pranatahadi, M.Kes.	Pengembangan Model Sekolah Keberbakatan Olah Raga Indonesia. Kerja Sama: Universitas Negeri Yogyakarta (UNY) - Universitas Negeri Surabaya (UNESA) - Universiti Malaya (UM) Malaysia.
6. Prof. Dr. Siswantoyo, M.Kes.,AIFO.	Pengembangan Alat Smart Reaction Time untuk Mengukur Kecepatan Reaksi Tangan dan Kaki Berbasis Digital. Kerja Sama : Universitas Negeri Yogyakarta (UNY) - Universitas Negeri Padang (UNP) dan Universiti Pendidikan Sultan Idris (UPSI) Malaysia.
7. Prof. Dr. Siti Irene Astuti D, M.Si.	Pengembangan Kebijakan Resiliensi Sekolah Berbasis Kearifan Lokal Untuk Mitigasi Bencana di Indonesia dan Covid-19
8. Dr. Nani Ratnaningsih, STP., MP.	MODIFIKASI PATI AREN (Arenga pinnata) DENGAN AUTOCLAVING-COOLING DAN APLIKASINYA PADA PEMBUATAN SOUN KAYA PATI RESISTEN UNTUK PENCEGAHAN DIABETES MELLITUS TIPE 2
9. Dr. Puji Yanti Fauziah, S.Pd.,M.Pd	PENGEMBANGAN MODEL PARENTING ONLINE DALAM MENINGKATKAN KETERAMPILAN ORANGTUA DALAM PENGASUHAN DAN PENDAMPINGAN ANAK BELAJAR #DIRUMAHSAJA DI MASA PANDEMI COVID-19
10. Dr. Ratna Candra Sari, S.E., M.Si., Ak.	Desain Edukasi Literasi Keuangan Syariah Melalui Financial Socialization dan Skill Building untuk Mewujudkan Ekosistem Halal
11. Dr. Ratna Candra Sari, S.E., M.Si., Ak.	REDUKSI FINANCIAL CYBERCRIME MELALUI EDUKASI LITERASI KEUANGAN DIGITAL UNTUK GENERASI MILENIAL BERBASIS FINANCIAL SKILL BULDING
12. Prof. Dr. Dadan Rosana, M.Si.	MODEL BLENDED LABORATORY BERBASIS IoT DENGAN PROTOKOL MQTT DAN AUGMENTED REALITY SEBAGAI STRATEGI REALISTIK PENINGKATAN HOTs MENUJU SDGs BIDANG PENDIDIKAN
13. Prof. Dr. Dra. Eli Rohaeti, M.Si.	Pengembangan Produk Tekstil Multifungsi melalui Aplikasi Nanopartikel Logam yang Disintesis Menggunakan Alga
14. Prof. Dr. Mochamad Bruri Triyono, M.Pd.	Pengembangan Model VIRANTY-SMK (Virtual Reality from Industry for SMK) Pendukung Pembelajaran Online di Masa Pandemi Covid-19
15. Prof. Dr. Mutiara Nugraheni, S.TP.,M.Si.	PENGEMBANGAN BERAS ANALOG "PROTASA" BERBASIS GERMINATED CEREALS & LEGUMES FLOUR SERTA MODIFIED STARCH SEBAGAI MAKANAN FUNGSIONAL UNTUK MENINGKATKAN DERAJAT KESEHATAN DAN KETAHANAN PANGAN INDONESIA
16. Prof. Dr. Mutiara Nugraheni, S.TP.,M.Si.	Pengembangan gluten-free noodles berbasis organic pigmented rice sprouts dan modified starch sebagai makanan fungsional untuk menurunkan risiko penyakit komorbid Corona Virus Disease-19



## Group 9

Scheme	Penelitian Disertasi Doktor
Reviewer	Dr. Mami Hajaroh, M.Pd.
Notetaker	Dr. Iis Prasetyo, S.Pd.,M.M.
Room PIC	Heri Purwanto, M.AP
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok9">https://di.uny.ac.id/iceri2021-kelompok9</a>
Author	Title
1. Prof. Anti Kolonial Prodjosantoso, M.Sc., Ph.D.	PENGEMBANGAN MODEL PEMBELAJARAN IPA BERBASIS NEXT GENERATION SCIENCE STANDAR (NGSS) BERMUATAN INDIGENOUS KNOWLEDGE UNTUK MENINGKATKAN DISCIPLINARY LITERACY SISWA DI SEKOLAH DASAR
2. Prof. Dr. Anik Ghuftron, M.Pd.	Model Job Embedded Professional Development Berbasis Blended Learning untuk Meningkatkan Kompetensi Guru Sekolah Dasar
3. Prof. Dr. Bambang Subali, MS.	PEMODELAN PEMBELAJARAN INTERDISIPLINER BERBASIS TOPIK UNTUK MENINGKATKAN KEMAMPUAN BERPIKIR HOLISTIK YANG KOMPREHENSIF PADA MATA KULIAH EKOLOGI
4. Prof. Dr. Dra. Sumaryanti, M.S.	INOVASI MODEL PEMBELAJARAN KOOPERATIF DALAM PENDIDIKAN JASMANI MELALUI PERMAINAN RUGBY UNTUK MENANAMKAN NILAI KARAKTER PESERTA DIDIK SEKOLAH DASAR
5. Prof. Dr. Dra. Sumaryanti, M.S.	INOVASI MODUL EDUCHE UNTUK MENGANALISIS AKTIVITAS FISIK OLAHRAGA DAN KEJADIAN OVERWEIGHT PADA REMAJA
6. Prof. Dr. Drs. Sugiman, M.Si.	Model Pembelajaran Matematika Berbasis Project dengan Kerangka STEM dan Islam (STEMI) untuk Mengembangkan Kemampuan Berpikir Kritis dan Self Regulated Learning
7. Prof. Dr. Heru Kuswanto, M.Si.	Pengembangan Modul Praktikum Terintegrasi Augmented Reality untuk Meningkatkan Motivasi dan Keterampilan Proses Sains Mahasiswa
8. Prof. Dr. Heru Kuswanto, M.Si.	Pengembangan Modeling Instruction Pada E-Learning Fisika Berbantuan Home-Lab-Kit untuk Meningkatkan Kemampuan Computational Thinking Mahasiswa
9. Prof. Dr. Jumadi, M.Pd.	Pengembangan Aplikasi Mobile Remedial System (MRS) Berorientasi Peningkatan Kemampuan Metakognitif dan Reduksi Miskonsepsi Fisika
10. Prof. Dr. Jumadi, M.Pd.	MODEL E-STEM PjBL DALAM PEMBELAJARAN IPA UNTUK MENINGKATKAN KEMAMPUAN ICT LITERACY DAN PEMECAHAN MASALAH SISWA SMP
11. Prof. Dr. Moh Farozin, M.Pd.	Model Layanan Dasar Blended Learning Berbasis Personalized Learning untuk Mengembangkan Kesiapan Karir Siswa
12. Prof. Dr. Siti Irene Astuti D, M.Si.	Model Konstruksi Social Responsibility Siswa pada Sekolah/Madrasah di Daerah Rawan Bencana
13. Prof. Dr. Tomoliyus, MS.	EFEK KUALITAS LAYANAN, DUKUNGAN SOSIAL, FINANSIAL, MOTIVASI DAN KEPUASAN TERHADAP KINERJA ATLET PUSAT LATIHAN DAERAH PON YOGYAKARTA
14. Prof. Dr. Tomoliyus, MS.	PENGEMBANGAN INSTRUMEN REAKTIF AGILITY DAN KOORDINASI MATA TANGAN UNTUK IDENTIFIKASI BAKAT TENIS MEJA
15. Prof. Dr. Tomoliyus, MS.	PENGEMBANGAN PENILAIAN AUTENTIK HASIL BELAJAR PENDIDIKAN JASMANI SEKOLAH DASAR MATERI PERMAINAN





## Group 10

Scheme	Penelitian Disertasi Doktor
Reviewer	Prof. Dr. Dadan Rosana
Notetaker	Nur Rohmah Muktiani S.Pd., M.Pd.
Room PIC	Nita Maghfiratul Jannah, S.Pd
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok10">https://di.uny.ac.id/iceri2021-kelompok10</a>
<b>Author</b>	<b>Title</b>
1. Dr. Insih Wilujeng, M.Pd.	PESANTREN SAINS DAN PENGINTEGRASIAN PENGETAHUAN AGAMA DALAM PEMBELAJARAN SAINS: Studi Etnografi
2. Ibnu Siswanto, S.Pd.T., M.Pd., Ph.D	Technopreneurship Skill di Masa Pandemi Covid-19 dan Implikasinya pada Pembelajaran Kewirausahaan di SMK
3. Prof. Dr. Drs. Edi Istiyono, M.Si.	PENGEMBANGAN MODEL PENILAIAN HOTS FISIKA CALON GURU BERBASIS CBT
4. Prof. Dr. Drs. Edi Istiyono, M.Si.	MODEL PENILAIAN KARAKTER PESERTA DIDIK BERBASIS KOMPUTER DI SEKOLAH MENENGAH ATAS (SMA)
5. Prof. Dr. Drs. Edi Istiyono, M.Si.	Pengembangan Mobile Assesing ( M-assesing) Berbasis Teori Tes Modern untuk Menilai Higher Order Thingking ( HOTS) Fisika Mahasiswa
6. Prof. Dr. Drs. Putu Sudira, MP.	Prinsip-prinsip Belajar Biola Idris Sardi dalam Pendekatan Pedagogy, Andragogy, Peeragogy, dan Heutagogy
7. Prof. Dr. Drs. Putu Sudira, MP.	Studi Fenomenologi Pengalaman Profesionalisme Guru Vokasional di Abad XII
8. Prof. Dr. Heri Retnawati, S.Pd.,M.Pd.	PENGEMBANGAN MODEL ASESMEN PEMBELAJARAN MATEMATIKA DENGAN FRAMEWORK STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS)
9. Prof. Dr. Heri Retnawati, S.Pd.,M.Pd.	Model Pembelajaran Berbasis Masalah Terintegrasi TPACK dan Ajaran Taman Siswa untuk Mengembangkan Kemampuan Computational Thinking Siswa
10. Prof. Dr. Heri Retnawati, S.Pd.,M.Pd.	Resiliensi Matematika: Suatu Grounded Theory Bagi Siswa Terdampak Pandemi Covid-19
11. Prof. Dr. I Gusti Putu Suryadarma, MS.	PENGEMBANGAN MODEL PEMBELAJARAN MARINE EDUTOURISM BERBASIS POTENSI LOKAL TAMAN NASIONAL WAKATOBI UNTUK MENINGKATKAN LITERASI LINGKUNGAN
12. Prof. Dr. I Gusti Putu Suryadarma, MS.	Studi Indigenous Knowledge Suku Tidung dan Dayak Kalimantan Utara dan Pola Pengintegrasianannya Dalam Pendidikan Biologi
13. Prof. Dr. I Gusti Putu Suryadarma, MS.	Pengembangan Model PBL-HL berorientasi Socio- Scientific Issue untuk Meningkatkan Pengetahuan Konseptual dan Literasi Lingkungan
14. Prof. Dr. Nurfinaz Aznam, SU.	Model Pembelajaran ISSITech (Inquiry berbasis Socio- Scientific Issues berbantuan ICT) dan Pengaruhnya Terhadap Soft skill dan Scientific literacy Calon Guru IPA
15. Prof. Dr. Zuhdan Kun Prasetyo, M.Ed.	Pengembangan Bahan Ajar Berbasis Model Pembelajaran Green Science Berorientasi Mitos Jawa dalam Perspektif Sains untuk Menumbuhkan Karakter Peduli Lingkungan dan Literasi Sains Siswa



## Group 11

Scheme	Penelitian Kerjasama International, Penelitian Terapan Unggulan Perguruan Tinggi, World Class Research
Reviewer	Prof. Dr. Farida Hanum
Notetaker	Dr. Ari Kusmiatun, S.Pd., M.Hum.
Room PIC	Tri Sumarni, S.P
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok11">https://di.uny.ac.id/iceri2021-kelompok11</a>
Author	Title
1. Ashadi, S.Pd., M.Hum., Ed.D.	Overseas Education Successes among Teacher Educators: A Narrative Study
2. Dr. Ari Kusmiatun, S.Pd., M.Hum.	DEVELOPMENT OF INDONESIAN LANGUAGE LEARNING MODULE FOR THAI SPEAKERS IN ACADEMIC PURPOSE: A RESEARCH COLLABORATION BETWEEN YOGYAKARTA STATE UNIVERSITY, INDONESIA AND FATONI UNIVERSITY, THAILAND
3. Dr. Dra. Wening Sahayu, M.Pd.	DEVELOPING GERMAN INSTRUCTIONAL MATERIALS FOR CULTURAL TOURISM DESTINATION GUIDING TECHNIQUES: A CORPUS-BASED STUDY
4. Dr. Tadkiroatun Musfiroh, S.Pd., M.Hum.	Attitudes and Language Choices of Students: Krama Javanese and Pattani Malay Language Maintenance in Indonesia and Thailand
5. Prof. Dr. Dra. Endang Nurhayati, M.Hum.	Designing A Curriculum of Javanese Language for Foreign Speakers
6. Prof. Dr. Drs. Pratomo Widodo, M.Pd.	Developing Corpus-Based Materials for Tourism Students in Indonesia and Thailand (Second Year)
7. Prof. Dr. Drs. Suwardi, M.Hum.	COVID-19 MITIGATION MODEL USING MEDICAL, FITNESS, AND CULTURAL PERSPECTIVES BETWEEN UNY INDONESIA AND MONASH UNIVERSITY MELBOURNE AUSTRALIA
8. Dr. Wuri Handayani, M.Si.	THE STRATEGIES OF MAINSTREAM MASS MEDIA IN INDONESIA AND MALAYSIA IN FIGHTING AGAINST COVID-19 RELATED HOAXES
9. Bekti Wulandari, S.Pd.T., M.Pd.	Adaptive Fuzzy Logic in Intelligent Electric Drive Add-On for Diffable Wheel Chair
10. Dr. Drs. Supahar, M.Si.	MODEL PENGEMBANGAN LABORATORIUM BERBASIS VIRTUAL INSTRUMEN SYSTEM (LabVIS) SEBAGAI MEDIA PEMBELAJARAN NATURE OF SCIENCE (NOS) UNTUK MENINGKATKAN LITERASI DATA DAN LITERASI TEKNOLOGI MENGHADAPI ERA DISRUPSI
11. Dr. Eng.Ir. Didik Nurhadiyanto, M.T.	Peningkatan Performa Gasket Metal Bergelombang Melalui Proses Coating Multi Layered
12. Dr. Ir. Drs. Widarto, M.Pd.	Pengembangan Model Pelatihan Tenaga Kerja Berbasis Kultur Kerja Industri Era Industri 4.0
13. Prof. Dr. Drs. Edi Istiyono, M.Si.	KLINIK FISKA Berbasis Computer Based Four Tier Diagnostic Test (CBDT Physics Clinic) Untuk Meningkatkan Keberhasilan Pembelajaran Fisika
14. Prof. Setyabudi Indartono, MM., Ph.D.	Model Pengembangan Pembelajaran Keberagaman, etika, perilaku seksual dan politik generasi milenial dengan pendekatan studi kasus dengan metode 4D virtual reality multiplayer game
15. Saryono, S.Pd.Jas., M.Or	Uji Efektivitas FIVE Sebagai Program Pencegahan Cedera Pada Olahraga Futsal
16. Prof. Anti Kolonial Prodjosantoso, M.Sc., Ph.D.	PEMANFAATAN LIMBAH ORGANIK SEBAGAI PREKURSOR SENYAWA KALSIMUM SILIKAT SEBAGAI SUATU USAHA MENGENDALIKAN PENCEMARAN LINGKUNGAN



## Group 12

Scheme	Penelitian Dasar, Penelitian Dasar Unggulan Perguruan Tinggi, Penelitian Kerjasama Internasional
Reviewer	Dr. Aman, M.Pd
Notetaker	Surono, S.Pd., M.Pd.
Room PIC	Dwi Riyanto, A.Md.
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok12">https://di.uny.ac.id/iceri2021-kelompok12</a>
Author	Title
1. Dr. Dra. Kun Setyaning Astuti, M.Pd.	THE MODIFICATION OF BLOOM'S TAXONOMY THEORY FOR CONSTRUCT MUSIC COMPETENCY STANDARD BASED ON MAPPING IN INDONESIA, FRANCE, AND THE NETHERLANDS
2. Dr. Farida Agus Setiawati, S.Psi., M.Si.	PENGEMBANGAN MODEL PENGUKURAN KUALITAS PERKAWINAN ORANG JAWA
3. Prof. Anti Kolonial Prodjosantoso, M.Sc., Ph.D.	STABILISASI LOGAM DALAM SENYAWA KALSIMUM SILIKAT SEBAGAI SUATU USAHA MENGENDALIKAN PENCEMARAN LINGKUNGAN
4. Prof. Dr. Dra. Eli Rohaeti, M.Si.	Pengembangan nanofiber berbasis selulosa dari limbah ampas tebu ( <i>Saccharum officinarum</i> L.) dan limbah rumah tangga melalui aplikasi nanopartikel logam sebagai bahan masker disinfektor
5. Prof. Dr. Dra. Wiyatmi, M.Hum.	KOSTRUKSI GENDER TOKOH PEREMPUAN SUPER DALAM CERITA RAKYAT INDONESIA DAN TRANSFORMASINYA DALAM KARYA SASTRA INDONESIA MUTAKHIR
6. Prof. Dr. Sri Atun, M.Si.	OPTIMALISASI PENGEMBANGAN PRODUK NANOKURKUMINOID DAN NANOEMULSI KURKUMINOID BERBAHAN DASAR EKSTRAK TEMULAWAK ( <i>CURCUMA XANTHORIZA</i> ) SEBAGAI OBAT BARU ANTIHIPERKOLESTEROL
7. Dr. Drs. Sudiyatno, M.E.	Pengembangan Model Evaluasi Ped-Q terhadap Konten Pembelajaran IPA pada Game-based Learning di Sekolah Menengah Pertama
8. Prof. Dr. Agus Maman Abadi, M.Si.	Pemodelan Matematis Asuransi dengan Risiko Bencana Gempa Bumi di Indonesia
9. Prof. Dr. Sri Atun, M.Si.	PENGEMBANGAN FORMULASI KOMBINASI HERBAL ANTICOVID-19 DALAM BENTUK MIKRO DAN NANOEMULSI SERTA UJI AKTIVITASNYA SEBAGAI MODULATOR RESPON IMUN
10. Prof. Dr. Tomoliyus, MS.	PENGEMBANGAN METODE LATIHAN SIRKUIT UNTUK PHYSICAL ABILITY PEMAIN TENIS MEJA
11. Prof. Ir. Moh. Khairudin, M.T., Ph.D.	DESIGN OF AN EFFICIENT TRAJECTORY CONTROL OF AN AUTONOMOUS TELEPRESENCE ROBOT
12. Dr. Ariefa Efianingrum, M.Si.	EDUCATIONAL POLICIES TO REDUCE BULLYING IN SCHOOLS: COMPARATIVE STUDIES IN INDONESIA AND MALAYSIA
13. Dr. Nurul Khotimah, M.Si.	The Roles of Institution in Enhancing Sustainable Rice Agricultural Land Management: a Comparative Study Between Indonesia and Malaysia in Formulating the Strategies to Deal with Climate Changes
14. Dr. Lia Yuliana, S.Pd., M.Pd.	THE STUDY OF ACHIEVEMENT OF THE LEARNING PROCESS STANDARD IN VOCATIONAL HIGH SCHOOLS IN PANDEMIC COVID-19 IN INDONESIA AND MALAYSIA
15. Prof. Dr. Lantip Diat Prasajo, S.T., M.Pd.	PENGEMBANGAN MODEL ASESMEN KEPEMIMPINAN PEMBELAJARAN KEPALA SEKOLAH BERBASIS ANDROID SEBAGAI UPAYA MENINGKATKAN KINERJA GURU SMA DI DAERAH ISTIMEWA YOGYAKARTA



## Group 13

Scheme	Penelitian Kerjasama Internasional
Reviewer	Prof. Dr. Tomoliyus, MS.
Notetaker	Triatmanto, M.Si
Room PIC	Rosyid Furqoni
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok13">https://di.uny.ac.id/iceri2021-kelompok13</a>
Author	Title
1. Dr. Drs. Suhadi Purwantara, M.Si.	The Impact of COVID-19 on South-East Asia: A Comparative Study on Singapore and Indonesia
2. Dr. Ali Mustadi, M.Pd.	EXPLORING THE TPACK FRAMEWORK USED IN DISTANCE LEARNING FOR ELEMENTARY SCHOOLS IN INDONESIA AND MALAYSIA DURING COVID-19 PANDEMIC
3. Dr. Aman, M.Pd.	THE EVALUATION OF CHARACTER EDUCATION PRODUCTS IN UNIVERSITAS NEGERI YOGYAKARTA INDONESIA AND PUNJABI UNIVERSITY PATIALA INDIA
4. Dr. Dra. Kun Setyaning Astuti, M.Pd.	Development of Dolanan Anak's song learning methods for the preservation of traditional arts and the inculcation of educational values in the new Normal Adaptation Era through Eastern (Indonesia) and Western (USA) approaches
5. Dr. Maimun Sholeh, M.Si.	Rating Determinants Of Bonds and Sukuk In Indonesia And Malaysia
6. Dr. Miftahuddin, M.Hum.	THE STUDY OF MULTICULTURAL EDUCATION AT UNIVERSITAS NEGERI YOGYAKARTA INDONESIA AND LR DAV COLEGE JAGROAN INDIA
7. Dr. Puji Yanti Fauziah, S.Pd.,M.Pd	DEVELOPING COMMUNITY LEARNING CENTER (CLC) ONLINE MODEL IN FACILITATING CHILD EDUCATION (CASE STUDY ON THE FAMILIES OF INDONESIAN MIGRANT WORKERS)
8. Dr. Rosita Endang Kusmaryani, M.Si.	Learning Experiences during COVID-19 Pandemic: Issues on Technological, Pedagogical, and Content Knowledge (TPACK), and Career Adapt-Abilities among Teacher
9. Dr. Sutirman, S.Pd., M.Pd.	Student's Behavior and Performance In Online Learning: The Role of Social Media Youtube as A Learning Source
10. Prof .Dr. Lantip Diat Prasajo, S.T., M.Pd.	THE STUDY OF RESEARCH MANAGEMENT STANDARDS AT UNIVERSITAS NEGERI YOGYAKARTA AND UNIVERSITI UTARA MALAYSIA
11. Prof. Dr. Dra. Endang Rini Sukanti, M.S.	Comparison of The effect of variations in the intensity of endurance training (walking-jogging-running) on the increase in aerobic capacity among Indonesian and Saudia Arabia College Students
12. Prof. Dr. Moh Farozin, M.Pd.	The Effect Of Psychoeducation Intervention Towards Psychological Well-Being and Coping strategy Among Higher Education Students Of Universiti Pendidikan Sultan Idris And Universitas Negeri Yogyakarta In The New Normal Era
13. Prof. Dr. Nahiyah Jaidi, M.Pd.	Ambidexterity Behavior Of Creative SMEs For Disruptive Flows Of Innovation: A Comparative Study Of Indonesia And Taiwan
14. Prof. Dr. Samsul Hadi, M.Pd.,M.T.	ANALYSIS OF EDUCATION DATA SYSTEMS IN SOUTHEAST ASIA USING TECHNOLOGY ACCEPTANCE MODEL AND END USER COMPUTER SATISFACTION
15. Prof. Dr. Siswantoyo, S.Pd.,M.Kes.	INNOVATION INSTRUMEN ASSESMENT OF THE SKILL, PERFORMANCE AND SOFTSKILL DIMENSSION IN SPORT COACHING GAMES FOR UPGRADING PERFORMANCE MODEL (CGFU-PM515) CONCEPT IN 21st CENTURY EDUCATIONS
16. Prof. Setyabudi Indartono, MM., Ph.D.	Sexual Intention Behavior Among bachelor Students: The challenge of Student Ethics Boundaries



## Group 14

Scheme	Penelitian Percepatan Guru Besar, Penelitian Kerjasama International
Reviewer	Prof. Dr. Sri Atun
Notetaker	Eka Ary Wibawa, S.Pd., M.Pd.
Room PIC	Amroini Karimah, SE
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok14">https://di.uny.ac.id/iceri2021-kelompok14</a>
Author	Title
1. Prof. Dr. Dra. Trie Hartiti Retnowati, M.Pd.	PENGEMBANGAN WAYANG KLITIK CERITA JOKO TINGKIR UNTUK MEDIA PEMBELAJARAN KRIYA
2. Prof. Dr. Drs. Sulis Triyono, M.Pd.	REPRESENTASI NILAI MULTIKULTURAL DALAM BUKU TEKS BAHASA JERMAN DAN BAHASA JAWA DI SMA DAN KESESUAIANNYA DENGAN TUJUAN PENDIDIKAN NASIONAL
3. Prof. Dr. Drs. Suwardi, M.Hum.	KAJIAN ANTROPOARKEOLOGI WAYANG TOKOH TRIPAMA JAWA DAN INDIA
4. Prof. Dr. Margana, M.Hum., M.A.	Pengembangan bahan ajar Bahasa Inggris Berorientasi pada Keseimbangan Fungsi Otak Kiri dan Otak Kanan
5. Dr. Amat Jaedun, M.Pd.	Outcomes-Based Curriculum in Disruption Era for Civil Engineering Study Program of Malaysia Technology University and Yogyakarta State University
6. Dr. Antuni Wiyarsi, S.Pd.Si., M.Sc.	PRE-SERVICE CHEMISTRY TEACHERS' SKILLS IN INTEGRATING SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM): A CASE FOR VOCATIONAL SCHOOL
7. Dr. Drs. Supahar, M.Si.	Development of STEM based Constructivist Model for Physics Blended Learning to Improve Students' Creative Thinking Skill and Learning Motivation
8. Dr. Ir. Fatchul Arifin, M.T.	Speech Emotion Recognition for Javanese Language based on Deep Learning
9. Dr. Ir. Zainal Arifin, M.T.	Study on the Identification of the Characteristics of Electric Motors in the Development of Electric Vehicles, UNY - UMP
10. Dr. Syukri Fathudin Achmad Widodo, S.Ag., M.Pd.	Model for Characters Strengthening Based On 5S to Support the Halal Industry in UNY and IIUM Students
11. Ibnu Siswanto, S.Pd.T., M.Pd., Ph.D	Factors affecting students' proactive personality and academic achievement: An empirical exploration of global awareness, motivation, and digital literacy effects
12. Prof. Dr. Drs. Putu Sudira, MP.	Skills Forecasts and Skills Anticipation of Tourism Workers after Covid19 in Indonesia and Australia
13. Prof. Dr. Kartowagiran, M.Pd.	Evaluation of Learning Implementation in The Time of Pandemic Covid-19 For Elementary Schools in Daerah Istimewa Yogyakarta Indonesia and Selangor Malaysia
14. Prof. Dr. Sugiyono, M.Pd.	THE EFFECTIVENESS OF ACADEMIC SERVICES IN THE PANDEMIC OF COVID-19 AT UNIVERSITAS NEGERI YOGYAKARTA AND PUNJABI UNIVERSITI PATIALA INDIA



## Group 15

Scheme	Penelitian Percepatan Guru Besar, Penelitian Institusional, Penelitian Kerjasama International
Reviewer	Prof. Drs. Jaslin Ikhsan, M.App.Sc., Ph.D.
Notetaker	Okky Indera Pamungkas,, M.Or.
Room PIC	Cerry Kartika Trizkyana
Zoom	<a href="https://di.uny.ac.id/iceri2021-kelompok15">https://di.uny.ac.id/iceri2021-kelompok15</a>
Author	Title
1. Prof .Dr. Lantip Diat Prasojo, S.T., M.Pd.	PENGEMBANGAN, PENERAPAN, DAN PENGUKURAN LEARNING MANAGEMENT SYSTEM (LMS) DI PERGURUAN TINGGI INDONESIA SELAMA COVID-19: SURVEI SKALA BESAR DENGAN PENDEKATAN ANALISA MULTI GROUP PADA STRUCTURAL EQUATION MODELING
2. Prof. Dr. Drs. Suranto, M.Pd.,M.Si.	POLA PENDIDIKAN KEPEMIMPINAN SEKOLAH MENENGAH ATAS DI YOGYAKARTA
3. Prof. Dr. Edi Purwanta, M.Pd.	Pengembangan Program BK Komprehensif Berbasis School Connectednes untuk Meningkatkan Social Emotional Learning di Masa Pandemi Covid-19 pada Siswa SMA di Kota Yogyakarta
4. Prof. Dr. Farida Hanum, M.Si.	IMPLEMENTASI ASAS-ASAS UMUM KEPEREMINTAHAN YANG BAIK (GOOD GOVERNANCE) DALAM PEMILIHAN UMUM KEPALA DAERAH KALIMANTAN SELATAN
5. Prof. Dr. Ir. Dwi Rahdiyanta, M.Pd.	RELEVANSI EMPLOYABILITY SKILLS PADA PENDIDIKAN VOKASIONAL BIDANG TEKNIK MESIN TERHADAP KEBUTUHAN INDUSTRI MANUFAKTUR DI ERA INDUSTRI 4.0
6. Prof. Dr. Samsul Hadi, M.Pd.,M.T.	Analisis Dampak PPDB Sistem Zonasi terhadap Kualitas Pendidikan, Kapasitas Kepemimpinan Kepala Sekolah, dan Profesionalisme Guru di DIY
7. Prof. Dr. Siswantoyo, S.Pd.,M.Kes.	INNOVATION SMART WHOLE BODY REACTION TEST DIGITECH BASE (SEBUAH KAJIAN PENYUSUNAN STANDARDISASI NORMA PERFORMANCE)
8. Prof. Dr. Siti Irene Astuti D, M.Si.	KONSTRUKSI TEORITIS RELIGIUSITAS PERSONAL UNTUK PENDIDIKAN KARAKTER
9. Prof. Dr. Sri Atun, M.Si.	KAJIAN AKSI DAN MEKANISME ANTIANGIOGENIK EKSTRAK BAWANG PUTIH TUNGGAL (Allium sativum 'Solo garlic') SECARA IN VIVO DAN IN SILICO
10. Prof. Dr. Suyanta, M.Si.	POTENSI BAKTERI ASAM LAKTAT SEBAGAI PROBIOTIK UNTUK MENINGKATKAN DAYA TAHAN AYAM BROILER
11. Prof. Dr. Wawan Sundawan Suherman, M.Ed.	Pengembangan Integrated Exercise and Measurement Technology Apparatus Berbasis Digital
12. Dr. Erwin Setyo Kriswanto, S.Pd.,M.Kes.	Analisis Trend Penelitian dan PPM Universitas Negeri Yogyakarta Tahun 2017 - 2021 untuk Meningkatkan competitiveness
13. Prof. Dr. Sri Atun, M.Si.	Strategi Peningkatan Kinerja Penelitian dan Pengabdian kepada Masyarakat (PPM) menuju PTNBH Universitas Negeri Yogyakarta
14. Dr. Hartono, M.Si.	USING PERTURBATION METHODS TO IDENTIFY PERIODIC SOLUTIONS IN MASS-SPRING SYSTEM WHEN PERTURBED BY A WIND FORCE
15. Kismiantini, S.Si., M.Si., Ph.D.	Enhanced model of singular spectrum analysis in identifying temporal rainfall patterns in Special Region of Yogyakarta, Indonesia
16. Prof. Dr. Drs. Edi Istiyono, M.Si.	EVALUATION OF LEARNING ACHIEVEMENT ASSESSMENT IN THE 21ST CENTURY FOR ELEMENTARY STUDENTS IN INDONESIA AND MALAYSIA



## Group 16

Scheme	ICERI
Reviewer	Retna Hidayah, ST.,MT.,Ph.D.
Notetaker	Riana Nurhayati S.Pd., M.Pd.
Room PIC	Adhika Enggarjati EW
Zoom	<a href="https://di.uny.ac.id/iceri2021-parallel1">https://di.uny.ac.id/iceri2021-parallel1</a>
<b>Author</b>	<b>Title</b>
1. Dinny Devi Triana	Assessment of Dance Practice Performance Using Rater
2. Waliyudin	HEURISTIC STRATEGY IN BASIC READING COURSE
3. Annisah	INCREASE STUDENTS' WRITING ABILITY THROUGH SELF-ASSESSMENT METHOD
4. Happy Anggarwati	DEVELOPMENT OF EDUCATIONAL GAME LEARNING MEDIA IN PPKN LEARNING TO INCREASE LEARNING MOTIVATION
5. DESILIA KUSMITANTIA WARDANI	METODE PRESENTASI TERBUKA TRIK JITU MENINGKATKAN RASA PERCAYA DIRI DALAM MENARI TRADISIONAL
6. Nur Aini	Revitalization of Strengthening Character Education Limited Face to Face Learning During The Covid-19 Pandemic
7. Fajar Indah Sari, S.Pd	Proses Kreatif Penciptaan Tari Kupu-kupu Sebagai Sarana Menumbuhkan Nilai Edukasi Terhadap Siswa Sekolah Dasar di Era Covid-19
8. Monika Sidabutar	STUDENT PERSPECTIVE OF THE LIBERATING LEARNING MODEL IMPLEMENTATION TO INCREASE THEIR LEARNING INDEPENDENCE
9. Zainal Bakri	The Evaluation Effectiveness of Distance Training by Kirkpatrick Model
10. Anik Widiastuti	CREATIVE PEDAGOGY AS AN INNOVATION IN SOCIAL STUDIES TEACHING AND LEARNING TO PROMOTE 21st CENTURY SKILLS
11. Siti Irene Astuti Dwiningrum	MOOC Improvement Strategies to Enhance Digital Literacy Capabilities
12. Dadan Rosana	Development of Blended Laboratory Based Augmented Reality in Virtual Practicum to Improve Digital Literacy and Concept Understanding of Students
13. novita Sari	THE DEVELOPMENT OF PROBLEM-BASED LEARNING MULTIMEDIA BY USING ECLIPSE ON THE MATERIAL OF STATE INSTITUTIONS IN SENIOR HIGH SCHOOL
14. Suyanta	PHYSICAL AND CHEMICAL CHANGES CORN COB AND RICE STRAW THROUGH FERMENTATION AMMONIATION TECHNOLOGY AS RUMINANT FEED INGREDIENTS
15. Didik Nurhadiyanto	Improved Performance of Corrugated Metal gaskets on Boiler's Piping System Through Multi Layered Coating



## Group 17

Scheme	ICERI
Reviewer	Dr. phil. Ir. Mashoedah, S.Pd., M.T.
Notetaker	Amrih Setyo Raharjo S.Pd., MPA.
Room PIC	Doni Fitriyanto
Zoom	<a href="https://di.uny.ac.id/iceri2021-parallel2">https://di.uny.ac.id/iceri2021-parallel2</a>
<b>Author</b>	<b>Title</b>
1. Andi Mawaddah Hamzah	A Critical Analysis of Mathematics Curriculum at Islamic Boarding School (Pesantren)
2. Anggi Septi Amelia	THE IMPLEMENTATION OF THE COOPERATIVE LEARNING MODEL OF STUDENT TEAMS ACHIEVEMENT DIVISION (STAD) TO IMPROVE LEARNING ACTIVENESS AND OUTCOMES OF GRADE VII C STUDENTS IN THE SOCIAL STUDIES SUBJECT AT SMP NEGERI 2 NGENGLAK
3. Riga Zahara Nurani	ANALYSIS OF STUDENTS' ABILITY IN IDENTIFYING THE INTRINSIC ELEMENTS OF FAIRY TALES
4. Asidigisianti Surya Patria	RESEARCH ROADMAP OF GRAPHIC DESIGN STUDY PROGRAM UNESA
5. Pranto Wati	The Effectiveness of Problem-Based Learning through e-Learning on Students' Critical Thinking Skills during the COVID-19 Pandemic
6. Anita Mustikasari	Creative Business Development in Facing the Adaptation of New Habits Era in Nonalia Batik SME
7. Resky Amalia Ramadhani, S.Pd	Analisis Bentuk Evaluasi Kurikulum 2013 Mata Pelajaran Seni Budaya Pada Masa Pandemi Covid-19 Di SMA Islam 3 Pakem Sleman Yogyakarta
8. Moch Bruri Triyono	PELATIHAN PENGEMBANGAN MODEL-MODEL PEMBELAJARAN ONLINE BAGI GURU SMK NEGERI 1 SEYEGAN PADA ERA PANDEMI COVID 19
9. Dwi Wulandari	PEMBELAJARAN SENI RUPA MASA PANDEMI COVID-19: GAMBARAN CORONA DALAM KARYA SISWA SDN 4 PENYARANG
10. Istanto Wahyu Djatmiko	PEMANFAATAN TEKNOLOGI ROBOT TERBANG UNTUK PEMBELAJARAN DAN PEMANTAUAN LINGKUNGAN PESANTREN HIDAYATULLAH YOGYAKARTA
11. Supahar	The effect of virtual practicum based on virtual reality to enhance digital literacy and problem-solving skills among junior high school students
12. Entoh Tohani	Literasi Teknologi Informasi dan Komunikasi Pengelola Community Learning Center dalam Mengelola Pendidikan Nonformal pada Masa Pandemi Covid-19
13. Setyabudi Indartono	PENGARUH KNOWLEDGE MANAGEMENT TERHADAP KESADARAN KESELAMATAN KARYAWAN DI PERUSAHAAN MANUFAKTUR
14. Susilowati	Workshop on Preparing Integrated Science Teaching Materials Adapted to Contextual NGSS (Next Generation Science Standards) with Covid-19 to Optimize PCK (Pedagogical Content Knowledge) for Middle School Science Teachers in the 21st Century Technology Era.
15. Yunike Juniarti Fitria	Music Archaeology in Education
16. Kuswarsantyo	"INFLUENCE OF JATHILAN MUSIC ON DANCERS INTRANCE SCENE"





## Group 18

Scheme	ICERI
Reviewer	Dr. Eng.Ir. Didik Nurhadiyanto, M.T.
Notetaker	Ahmad Chafid Alwi, M.Pd.
Room PIC	Husain Acepsa Cholis, S.Kom
Zoom	<a href="https://di.uny.ac.id/iceri2021-parallel3">https://di.uny.ac.id/iceri2021-parallel3</a>
<b>Author</b>	<b>Title</b>
1. Al Kahfi Bibul Zaqi	Civic Education as Value Education for Citizens in Society 5.0 Era
2. Riza Fatimah Zahrah	THE MOTIVATION TO STUDY AFFECTING ABILITY TO FINISH OF A WORD PROBLEM PRIMARY STUDENTS
3. bunga adelia	THE ROLE OF THE PPKN TEACHER IN ANTICIPATING SARA VIOLATIONS AMONG AL-AZHAR 3 SHS STUDENTS IN BANDAR LAMPUNG
4. Heni Susanti	ANALISIS FUNGSI, MAKNA DAN NILAI MORAL DALAM UPACARA RITUAL Kesenian COWONG
5. Nurrahmania	Prosesi tujuh bulanan sebagai symbol budaya masyarakat Dompu NTB (Nusa Tenggara Barat)
6. Yustina	The Effect of Constructivism-Based STEM on Students' Creative Thinking Skills in Biotechnology Learning
7. Fu'adi	IDRIS SARDI: HIS EXISTENCE AND DEDICATION TO THE DEVELOPMENT OF MUSIC IN INDONESIA
8. Arti Prihatini	RESEARCH TRENDS OF THE INDONESIAN AS SECOND LANGUAGE LEARNING: A BIBLIOMETRIC ANALYSIS
9. Suhandoyo, M.S.	Implementation of Character Assessment In the Science Learning Process in Junior High School based on School Culture
10. Ashadi	In search of overseas graduate identity: stories from struggling scholars
11. Sudiyatno	SIPESIA: AN EDUCATIONAL GAME FOR LEARNING HUMAN DIGESTIVE SYSTEM AT JUNIOR HIGH SCHOOLS
12. Lantip Diat Prasoho	THE STUDY OF RESEARCH MANAGEMENT STANDARDS AT UNIVERSITAS NEGERI YOGYAKARTA AND UNIVERSITI UTARA MALAYSIA
13. M. Lies Endarwati	EMPOWERMENT OF SMALL AND MEDIUM ENTERPRICES (SME) IN BUGEL VILLAGE THROUGH TECHNOLOGY AND FINANCIAL LITERACY IN THE COVID 19 PANDEMIC ERA
14. Yin Yin Septiani	K-POP DANCE GIRLS AND MOSLEM WOMEN IN INDONESIA: AN AXIOLOGICAL REVIEW
15. Shely Cathrin	Utilising Leisure Time Among Indonesian Youth Across the Nation



# THE TRAINING OF PERSONAL AND SOCIAL SKILL FOR STUDENTS OF UNIVERSITAS NEGERI YOGYAKARTA AND PUNJABI PATIALA UNIVERSITY INDIA

**Margana, Lantip Diat Prasajo, Aman**

(Universitas Negeri Yogyakarta)

## ABSTRACT

This community service activity aims to motivate students to increase their understanding of personal skills and social skills, increase their understanding and technical practical ability about personal skills and social skills which include: ( 1) Motivating (building the will) to increase the understanding and personal skills and social skills of students of history study programs at UNY Indonesia and PUP India have a positive impact on improving life skills student, (2) students can take advantage of increasing personal skills and social skills, (3) increasing the role of students in their efforts to continue to add insight into personal skills and social skills as supporting aspects of life skills student. The target of this activity is history study program students at UNY Indonesia and PUP India who have the willingness and ability to be trained personal skills and social skills. The selection and targeting of this training have strategic-rational considerations, efforts to increase student understanding of personal skills and social skills and take 25 students for UNY dan 15 students PUP India, the training will be held in 2 days or a minimum of 16 hours of meetings. Based on the previous explanation, it was known that there was an increase in personal and social skills after training on character education models for UNY and PUP students. The results of the pretest showed that the average classification was quite good on personal skills with an average of 3.37. While the results of the posttest showed an increase to a good classification with an average of 3.82. Not different from social skills, after the training there was an increase in results, namely from an average of 3.42 to 3.98 with a fairly good classification to good. Based on these data, it shows that all aspects that are assessed both regarding personal and social skills show a fairly good and good classification.

Keywords: Training, personal skills, social skills, students



# Adaptation of Hormone Changes in Long-distance Running Athletes of Athletics UNY's Athletic Student Activity Unit to Variations in Exercise Intensity

Sumaryanto, Eddy Purnomo, Novita Intan Arovah

## Abstract

Anabolic/catabolic hormone balance in athletes is used to monitor and evaluate the acute hormonal response and chronic effects of exercise.

The purpose of this study was to determine the response (acute effect) and adaptation (adaptation effect) between anabolic (i.e. testosterone) and catabolic (i.e. cortisol) hormones which were given 6 weeks of training to the HITT method in long-distance athletes, students of Athletics UNY's Athletic Student Activity Unit.

This research is an experimental study with a one group pretest and post test design with the number of research subjects totaling 20 male athletes with inclusion criteria in the form of athletes who are members of the long-distance running group at the athletic UNY's Athletic Student Activity Unit with an age range of 17-25 years. Research subjects did exercise for 6 weeks of physical exercise with the HITT method. Measurement of the acute effect and hormonal adaptation of testosterone/cortisol was carried out by taking blood before exercise (pretest) and after the initial exercise in the first session (response) after 6 weeks of training, the third measurement (posttest) was carried out to measure adaptation of HITT exercise to hormonal adaptation of athletes. Statistical analysis were conducted using the Friedman test using SPSS-25 by comparing hormonal response data at pretest, post test 1 and post test 2.

The results of the normality test for the testosterone hormone data were pretest  $p > 0.05$ , response test  $p > 0.05$  and pretest  $p > 0.05$ , while the cortisol pretest data were  $p > 0.05$ , pretest  $p > 0.05$  and post-test data  $p > 0.05$ , then homogeneity test for the testosterone hormone was homogeneous with a magnitude of  $p > 0.05$  while the cortisol homogeneity test was  $p > 0.05$ . While the results of the different tests for the three tests for testosterone, there was no difference in the average between the pretest, response test and posttest with a  $p$  value = 0.443, but descriptively there was a difference in the mean between the three tests. Meanwhile, for the different test for the hormone cortisol, there was also no average difference between the pretest, response test and posttest with a  $p$  value = 0.093, then for differences in adaptation between the hormone testosterone and cortisol there was a significant difference with a  $p$  value = 0.04.

Conclusion The results show that there is no significant difference in six weeks of training using the HITT method but there is a difference in the average adaptation and response of the hormones testosterone and cortisol from long-distance runner athletes from UNY athletics UNY's Athletic Student Activity Unit. These data support the importance of the hormones testosterone and cortisol as potential biological markers, especially for long-distance runners. Further research is required on hormonal response and adaptation in a more heterogeneous population and a longer follow-up period.

**Keywords:** Exercise response, Exercise adaptation, Testosterone and Cortisol



# **PENGEMBANGAN PERANGKAT PEMBELAJARAN BERBASIS *TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE (TPACK)* BAGI GURU IPA DAN IPS DI DIY**

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## **Abstrak**

Proyek PKM ini bertujuan untuk meningkatkan kompetensi guru dalam pembelajaran melalui pelatihan TPACK untuk guru IPA dan IPS di Provinsi DIY. Program ini dilaksanakan secara daring dari bulan april sampai oktober dengan diikuti oleh 65 guru IPA dan IPS. Pelaksanaan kegiatan PPM ini terbagi menjadi lima tahap yaitu pertama penyampaian materi, diskusi-informasi, penugasan dan pelatihan, pendampingan dan monitoring, implementasi dan evaluasi kegiatan. Hasil dari pelaksanaan program adalah peserta mendapatkan pemahaman perangkat pembelajaran, memiliki keterampilan menyusun perangkat pembelajarannya serta meningkatkan motivasi dalam mengembangkan perangkat pembelajarannya berbasis TPACK.

Kata kunci: TPACK, IPA, IPS



# VANAME SHRIMP FARM CULTIVATION WITH MICRO BUBBLE TECHNOLOGY IN MIRIT KEBUMEN REGENCY

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## ABSTRACT

The state of Indonesia has a percentage consisting of 77% of the total ocean and it is not wrong that Indonesia's main commodity is fisheries. Shrimp farming business in Mirit Village has been done for a long time with 40% of the population is fish patani and 20% is shrimp enhancers. Vaname shrimp is one of the shrimp that has characteristics can be cultured with a large quantity and has a size of more than 30 cm. So if sold has high potential in the local and international market. Some crucial problems caused by shrimp farming group partners have problems including the lack of technology that accelerates the harvesting period of shrimp in the village of Mirit District Mirit, Kebumen; There is no knowledge of how to measure the percentage of depth, PH, oxygen content and partners do not yet have knowledge about shrimp marketing management so *joomla-based e-commerce websites* are needed so that shrimp sales can be optimal. The main methods and externals carried out in the implementation of the Community Partnership Program include the application of micro bubble *bost technology* through the creation of *Micro-Bubble Generator* (GMB) design to produce oxygen and high PH in ponds, provide training and guidance in managing shrimp ponds effectively, and produce *e-commerce websites* in the marketing of shrimp production through online. Additional external PKM is the publication of articles in national journals, ICERI Conference, and in national newspapers or newspapers, namely *tribun Jogja*.

Keywords: pond; shrimp; vaname; *micro bubble bosttechnology*; *e-commerce*



# **PENINGKATAN KETERAMPILAN PENGASUHAN PADA PEKERJA MIGRAN INDONESIA DI SINGAPURA**

**Rita Eka Izzaty, Siti Rohmah Nurhayati, Rahmatika Kurnia Romadhani,  
Wijayani Indira Maharani, Zainur Rahman Fakhruddin Nashrullah**

Jurusan Psikologi, Fakultas Ilmu Pendidikan, Universitas Negeri Yogyakarta

## **Abstract:**

This Community Service Program (PPM) was designed because of the problems that occurred in Indonesian Migrant Workers' Children (APM). The lack of care and protection makes several NERs malnourished, vulnerable to becoming victims of physical and psychological violence, or sexual violence, lack of education, and suboptimal health. Therefore, it is necessary to make efforts from all parties to be able to overcome and prevent even worse things from happening to APM. This Community Service Program aims to find out about self-understanding and the target audience for their status as parents, healthy relationships in the family, as well as children's rights, and positive parenting which is followed directly. The form of the PPM program is in the form of an online workshop as part of psychological services through the zoom platform and psychological consultation via WhatsApp. The target audience is Indonesian Migrant Workers (PMI) who live in Singapore as many as 80 people (age range 18-43 years and all are female). This series of programs is carried out from July 18-25, 2021. Evaluation of the use of pre and post-tests with analysis using the Wilcoxon test. The results show that there is a significant difference in insight/knowledge among participants regarding the topics or issues discussed in the WAG so that the PPM implementation can be proved to be successful.

Keywords: children's rights, self-introduction, harmonious relations, parenting, Indonesian migrant workers



# IMPROVEMENT OF DIGITAL LITERATURE AND SOCIO-ECONOMIC LITERACY TOWARDS COVID-19 RESILIENT VILLAGE

**Sasiana Gilar Apriantika, Awanis Akalili, Grendi Hendrastomo.**

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## ABSTRACT

The Covid-19 pandemic does not only have an impact on the health sector, but also has an impact on the social and economic fields, including those felt by the people of Mangir Lor Hamlet, Sendangsari Village, Kapanewon Pajangan, Bantul Regency. Policies regarding activities from home lead to an increase in the use of the internet and social media, including by children, so that digital literacy training is needed for parents to be able to provide supervision to children regarding social media activities. Through community service activities, the research team carried out media and social literacy. In media literacy, the team made three literacy videos, namely (1) The Importance of Media Literacy for Children (2) Youtube Access Restriction Tutorial for Children, and (3) Instagram Access Restriction Tutorial for Children. The three videos were uploaded on the Youtube site so that apart from being accessible to the Mangir Lor Community, also other Youtube users. With the video tutorial, the public is aware of the importance of the role of parents in supervising children's access to social media. Furthermore, training was also carried out for the youth of the village of Mangir Lor to be able to become facilitators and participate in improving the understanding of media literacy for children.

Keywords: Media Literacy, Social Literacy, Awareness Efforts



# SCIENTIFIC WRITING TRAINING FOR MGMP IPS TEACHERS IN YOGYAKARTA

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## Abstract

Professional competence includes expertise or expertise in their field, namely mastery of the material being taught and its methods, a sense of responsibility for their duties and a sense of togetherness with other teacher colleagues. The phenomenon of falsification of PAK can be an indicator that can injure professional competence due to difficulties in writing articles. The activity method is a combination of tutorials or lectures, discussions or questions and answers and independent and group practice accompanied by resource persons from the service team through non-face-to-face online. Based on the results of the online assessment of the simulation script of scientific writing, the results were 65% in the very good category with a score above 81; 10% is categorized as good with a score between 61 to 80, 15% is categorized as good enough with a score of 41 to 60, while 10% is in the poor category with a score of 21 to 40 and 0% is categorized as very bad with a score below 20. So it can be concluded that the PPM participants have understood the material presented by the Service Team. Based on the results of the PPM participant satisfaction questionnaire distributed by the Service Team as a form of evaluation of PPM activities, it was found that 85% were in the high category, 15% were in the medium category and 0% were in the medium category. low category. So it can be concluded that PPM participants have high satisfaction.

Keywords: training, scientific writing, social studies





# PEMANFAATAN TEKNOLOGI ROBOT TERBANG UNTUK PEMBELAJARAN DAN PEMANTAUAN LINGKUNGAN PESANTREN HIDAYATULLAH YOGYAKARTA

Istanto Wahyu Djatmiko, Ariadie Chandra Nugraha, Sigit Yatmono

## Ringkasan

Teknologi membuat robot terbang atau drone sudah banyak diterapkan untuk kebutuhan sipil, terutama di bidang bisnis dan pendidikan. Dalam bidang pendidikan drone digunakan sebagai wahana belajar sistem kendali otomatis, pengolahan citra dan proses pemetaan daerah atau untuk pendokumentasian kegiatan belajar. Kegiatan PPM ini dilaksanakan dengan tujuan memanfaatkan teknologi drone untuk pemantauan lingkungan dan pembelajaran ekstrakurikuler di Pondok Pesantren Hidayatullah Yogyakarta

Pesantren Hidayatullah merupakan pesantren masyarakat yang memiliki konsep yang menyatu dengan lingkungan masyarakat sekitar yang terbuka. Pesantren Hidayatullah menyelenggarakan kegiatan pembelajaran berbasis ilmu agama dan ilmu pengetahuan umum mulai dari jenjang Madrasah Ibtidaiyah (MI), Madrasah Tsanawiyah (MTs), dan Madrasah Aliyah (MA). Siswa (santri) juga dibekali dengan kegiatan belajar *life skill* dengan tujuan untuk melatih ketrampilan dan keahlian santri. Teknologi drone merupakan salah satu teknologi terkini yang perlu dipekenalkan kepada siswa (santri). Sasaran kegiatan PPM ini adalah guru-guru yang menangani kegiatan ekstrakurikuler di bidang Infomasi Teknologi dan Komputer sebanyak 5 orang dan siswa (santri) jenjang MA sebanyak 30 orang. Kegiatan PPM dilaksanakan dalam bentuk *Training of Trainer (ToT)* dalam rangka pemanfaatan drone sebagai pelatih dan operator untuk pemantauan situasi Pondok Pesantren Hidayatullah dan memberikan pelatihan pengoperasian dan perawatan drone dalam rangka kegiatan ekstrakurikuler bagi siswa (santri).

Hasil kegiatan PPM tahap 1 ini dihasilkan unit drone yang telah diujicobakan secara teknis di lapangan, titik koordinat untuk operasi drone di lokasi Ponpes Hidayatullah telah ditentukan sebanyak 10 titik koordinat, dan modul pelatihan pemanfaatan drone untuk pembelajaran dan pemantaun situasi pembelajaran di Ponpes Hidayatullah. Kegiatan tahap 2 dilaksanakan secara langsung melalui tatap muka (luring) dalam bentuk pelatihan ToT bagi guru selama 7 jam dan bagi siswa (santri) selama 7 jam, publikasi ke media massa Kedaulatan Rakyat, Seminar Internasional ICE-Elinvo, dan Video YouTube.



# **Pemberdayaan Perempuan Pengrajin Tenun Lurik Kembangan melalui Pengembangan Produk dan Teknik Pemasaran Berbasis Sosial Media**

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## **Abstrak**

Tujuan kegiatan ini adalah untuk membantu mitra dalam mengatasi permasalahan: (1) pengembangan desain produk tenun lurik; (2) pengembangan teknik pemasaran berbasis social media; (3) pengembangan teknologi/peralatan produksi; (4) meningkatkan produktivitas. Metode yang digunakan adalah dengan transfer teknologi mesin kelos benang untuk meningkatkan kapasitas produksi. Selain itu dilaksanakan juga *transfer of knowledge* dalam rangka memberikan pelatihan dan pendampingan, dengan metode ceramah, diskusi, dan praktik langsung. Beberapa hal yang dihasilkan adalah: (1) mitra telah menguasai kemampuan pengembangan desain inovasi produk melalui teknik painting kain tenun lurik; (2) mitra telah menguasai teknik pemasaran berbasis sosial media; (3) mitra memiliki peralatan produksi berupa teknologi mesin kelos benang; (4) mitra mengalami peningkatan produktivitas sebesar 66,67%, nilai asset mitra bertambah, yaitu peralatan produksi sebesar 10,5% dan omset pendapatan meningkat sebesar 12,8%.

Kata kunci: Pemberdayaan, Lurik, Kembangan



# PELATIHAN PENINGKATAN *SKILL* LITERASI DIGITAL DAN TEKNOLOGI UNTUK MENINGKATKAN KEMAMPUAN PENGELOLAAN PEMBELAJARAN DARING BAGI GURU MGMP AKUNTANSI KABUPATEN KULONPROGO

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## Abstract

Learning during the Covid-19 pandemic is dominated by online learning, where digital literacy skills and technological literacy are needed by teachers. However, there are still many digital literacy skills and technological literacy possessed by teachers are not optimal. Whereas digital literacy skills and technological literacy are supporters of successful implementation of online learning. Thus, the Community Service Program Team providing training to improve digital literacy skills and technology to improve online learning management capabilities. The service activity was carried out on July 17, 2021 to August 7, 2021, involving 23 MGMP accounting teachers in Kulonprogo Regency. Overall this activity went smoothly and successfully. This success was shown, among others: a) As many as 83% of participants were able to set up google classroom, utilize online learning media, and set up online quizzes; b) 94% of participants are able and skilled in identifying key information, managing information from various sources, evaluating digital information; c) 94% of participants are able and skilled to learn new technology, practice various applications, use technology effectively, and differentiate technology appropriately .

**Keywords:** online learning, digital literacy skill, technology literacy skill, accounting teacher, community service



# DIGITAL LITERACY OF SECONDARY SCHOOL STUDENTS: CURRENT CONDITION AND POTENTIAL FUTURE IMPROVEMENT

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## Abstract

Digital literacy is a must mastered competency for majority of global citizens due to its power to support diverse skills development. However, a large number of Indonesians is still lack of it, especially those who live in villages. The hit become harder once Covid19 pandemic occurred, forcing students to relying to themselves to study through online modes without prior sufficient training. This paper is assessing current states of secondary school students' digital literacy skills and analyzing the opportunities for enhancement by given facts. This study involves 28 both junior high and senior high school students as respondents of digital literacy level survey. In depth interview was conducted to delve further elaboration on real conditions faced by students. Finally, through literature survey, we proposed some approaches to improve students' digital literacy through informal classes.

**Keywords:** digital literacy, secondary school students, covid19 pandemic, in-depth interview, digital literacy improvement



# Optimizing Science Teacher Competencies in Inquiry Based Learning in Online Learning through Workshops of Science E-Worksheet

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## Abstract.

The COVID-19 pandemic that has occurred has changed all the existing arrangements in the world, including the science learning process. To anticipate the spread of the virus, there are social distancing policies that have an impact on the online learning process or learning from home. Therefore, science teachers are required to package learning so that it is in accordance with the nature of science learning by not ruling out research activities. This workshop was the result of research by the service team on the application of research products to Inquiry Based Learning (IBL) by applying e-worksheet to science learning. This training activity aims to improve the quality of student assessment so that they can apply the PISA model of science assessment to measure scientific literacy skills. The activities that will be carried out are to disseminate research results from the service team on the development of tools, especially the electronic version of the Inquiry-based worksheet, improve teacher skills in developing e-worksheets, especially those that integrate inquiry into learning, improve teacher skills in creating student centre learning by activating students, improve teacher creativity in designing e-worksheets that integrate Inquiry Based Learning. This activity was carried out by means of tutorials (face to face virtual), workshops, structured assignments, and consultations with the following details. Tutorials and workshops, namely the delivery of Inquiry Based Learning materials and their implementation in learning, (b) development of e-Worksheet teaching materials, (c) Utilization of Virtual Laboratory in learning. Structured Tasks, namely the preparation of e-worksheets that integrate Inquiry Based Learning for science subjects based on the 2013 curriculum. Task consultation, namely consultations carried out via email/WA/HP, especially for trainees who have difficulty completing structured assignments. The results of this activity indicate that the science teachers of SMP in Bantul Yogyakarta have the competence in conducting Inquiry learning with the prepared E-Worksheet media. The teacher has been able to design an inquiry-based learning e-worksheet in science learning for material with appropriate characteristics.

Keyword: Inquiry based Learning, competencies science teacher, e-worksheet



# TRAINING ON UTILIZATION *VIRTUAL LABORATORY* BASED ON PHET INTERACTIVE SIMULATIONS AS AN EFFORT TO IMPROVE SCIENCE TEACHER ABILITY IN CONDUCTING LAB WORK ACTIVITY IN STUDY FROM HOME PROGRAM

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## Abstract

The program aims to: 1) enrich the knowledge of science teachers regarding PhET Interactive Simulations as a tool to conduct science lab work, 2) train the skills of science teacher in using PhET Interactive Simulations to conduct science lab work virtually. The subjects were the science teachers of MTs/ junior high school in Sleman Regency. This activity was held on 4, 11, 18 June 2021 virtually through Google Meet and was attended by 27 teachers. The stages of this activity include preparation, implementation and evaluation. At the preparation stage, coordination between members, division of tasks, determination of activities and materials sequence were carried out. In addition, coordination was also carried out with partner coordinators to determine the time and place of activities. At the implementation stage, knowledge enrichment, demonstration how to use PhET Interactive Simulations, workshop on developing learning materials to implement PhET in science learning, and finalization were carried out. Finally, the program was closed by evaluating both process and results as well. The results shows that the trainees: 1) get the knowledge enrichment regarding PhET Interactive Simulations as a tool to conduct science lab work, 2) are able to use PhET Interactive Simulations in conducting science lab work virtually. Therefore, hopefully it will help science teacher in improving science learning quality in study from home program.

**Key words:** Training, Virtual lab, PhET Interactive Simulations, Science Learning



# PELATIHAN DAN PENDAMPINGAN PEMBUATAN PUPUK ORGANIK DENGAN TEKNOLOGI EM-4 DI DEDEL WETAN, DESA DADAPAYU, KECAMATAN SEMANU, KABUPATEN GUNUNGKIDUL

## Abstrak

Salah satu desa yang ada di Kabupaten Wonosari adalah Dusun Dedel Wetan, Desa Dadapayu, Kecamatan Semanu. Desa ini menjadi lokasi KKN UNY pada tahun 2021 dan akan dilanjutkan untuk tiga tahun berikutnya. Secara umum kondisi alam di wilayah Dusun Dedel Wetan, Desa Dadapayu, Kecamatan Semanu dengan pola muka bumi berbukit-bukit. Karakteristik tanah berstruktur keras, berwarna kemerahan, kandungan air rendah, dan didominasi lahan pertanian dan perkebunan tadah hujan Tujuan PPM-KKN ini yaitu 1) meningkatnya peran mahasiswa KKN dan DPL terhadap penerapan teknologi tepat guna, sehingga meningkatkan keberdayaan dan kemandirian masyarakat di lokasi KKN, 2) terjadinya kemitraan antar mahasiswa yang memiliki berbagai keterampilan sehingga dapat terwujud kerjasama yang baik untuk memberdayakan dan meningkatkan kemandirian usaha pertanian sebagaisalah satu pilar ekonomi keluarga, 3) meningkatnya pengetahuan dan teknologi di kalangan masyarakat yang berguna untuk meningkatkan keberhasilan usaha pertanian, sehingga dapat menjadi aset yang terus mendapatkan kemanfaatan dari segi ekonomi, sosial, budaya, dan kesejahteraan. Metode kegiatan PPM-KKN yang digunakan dalam melakukan pemberdayaan kelompok sasaran adalah sebagai berikut, observasi dan wawancara , sosialisasi, pelatihan dan pendampingan Peran mahasiswa KKN dan DPL terhadap penerapan teknologi tepat guna meningkat,kemitraan antara mahasiswa yang memiliki berbagai keterampilan dapat terwujud dan kerjasama yang bai, pengetahuan dan teknologi di kalangan masyarakat (petani) meningkat dan keberhasilan petani dalam usaha pertanian juga meningkat.



# IMPLEMENTASI E-MARKETING SEBAGAI USAHA MENJAGA KETAHANAN EKONOMI MASYARAKAT PENGRAJIN TENUN LURIK PAKELAN MENGHADAPI DAMPAK PANDEMI COVID 19

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## Abstrak

Tujuan kegiatan ini adalah: (1) merancang, menentukan dan menerapkan teknik *e-marketing* yang tepat untuk diterapkan kepada pihak pengrajin tenun lurik Pakel Arum; (2) mengetahui antusiasme pengrajin tenun lurik Pakel Arum dalam menerapkan teknik *e-marketing*; (3) meningkatkan omset pendapatan pengrajin tenun lurik Pakel Arum melalui penerapan teknik *e-marketing*.

Kegiatan ini terdiri dari dua kegiatan utama, yaitu pelatihan dan pendampingan. Untuk kegiatan pelatihan dilaksanakan dengan menggunakan metode ceramah, diskusi dan tanya jawab. Sedangkan untuk kegiatan pendampingan dilaksanakan dengan metode simulasi, tutorial dan praktik langsung.

Hasil kegiatan yang telah dicapai adalah: (1) teknik *e-marketing* yang tepat untuk diterapkan adalah pemasaran melalui media sosial (*face book & Instagram*), website, dan *market place*; (2) mitra sangat antusias dan bersemangat dalam mengikuti seluruh rangkaian kegiatan pelatihan dan pendampingan teknik *e-marketing*; (3) peningkatan omset mitra telah tercapai sekitar 15,68%.

Kata kunci: *e-marketing*, tenun lurik, dusun Pakelan





## ABSTRAK

Usaha Kecil dan Menengah (UKM) merupakan sektor yang paling terdampak pandemi Covid-19 di Indonesia. Padahal sektor tersebut merupakan yang paling banyak menyerap tenaga kerjasekitar 97% dan kontribusinya terhadap produk domestik bruto (PDB) nasional sekitar 60%. Salah satu UKM yang terdampak COVID-19 adalah UKM Batik Nonalia, Bantul. Selama pandemi COVID-19 mengalami penurunan omzet yang sangat dratis hampir mencapai 80%. Selain itu juga terdapat kendala yang dihadapi oleh UKM Batik Nonalia terlebih di era Adaptasi Kebiasaan Baru (AKB) yaitu yang pertama, dalam segi pemasaran, UKM Nonalia masih terbelang konvensional dan kurang mampu mengoptimalkan pemasaran digital karena hanya menjual produk di outletnya, mendistribusikan di beberapa pasar tradisional dan hanya mampu menjangkau pasar lokal. Kemudian, diversifikasi produk batik juga menjadi salah satu kendala bagi UKM Batik Nonalia. UKM Batik Nonalia, saat ini belum mampu beradaptasi dengan cepat mengatasi kebutuhan konsumen di era ini. Sejauh ini, produk yang dihasilkan masih terbatas pada lembaran kain, pakaian kerja dan pakaian bepergian. Selanjutnya, pengenalan produk pada UKM Batik Nonalia masih dirasa kurang. Banyak konsumen yang belum yang mengenal produk batik UKM Nonalia. Untuk menghadapi permasalahan tersebut, beberapa solusi yang diusulkan yaitu dengan strategi digital marketing dan pengembangan usaha kreatif dalam upaya pemulihanekonomi usaha UKM Nonalia Batik melalui pembuatan Website/Toko Online, memasuki pasar melalui media social dan e-commerce, memberikan pembekalan pelatihan pengambilan foto produk, pelatihan diversifikasi produk batik dan pembuatan social media campaign, persiapan dan sosialisasi pra eduwisata agar UKM Batik Nonalia lebih dikenal masyarakat dan mampu meningkatkan minat beli konsumen. Luaran kegiatan pengabdian masyarakat ini yaitu publikasi pada Seminar Nasional Pengabdian Masyarakat UAD, media masa cetak pada Harian Merapi Yogyakarta, video yang diunggah di Youtube dan memberikan dampak penerapan iptek pada tingkat mekanisasi, IT, dan manajemen. Pelaksanaan kegiatan pengabdian kepada masyarakat skim PKM yang dilakukan di Dusun Gedongsari 06 Wijirejo, Pandak, Bantul Yogyakarta selama 6 bulan dengan 3 orang Tim Pengabdian.



# WORKSHOP WAYANG CORONA UNTUK *SELF-HEALING* DAN PENINGKATAN KEMAMPUAN PENGEMBANGAN EKONOMI KREATIF DI MASA PANDEMI COVID-19 BAGI DIASPORA INDONESIA DI AUSITRALIA

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## Abstrak

Pandemi Covid-19 telah memberikan dampak besar pada penurunan kesehatan mental dan stabilitas ekonomi masyarakat secara global. Dalam menghadapi situasi ini, masyarakat Indonesia yang ada di Australia membutuhkan solusi alternatif untuk peningkatan Kesehatan mental dan kapasitas untuk menjadi inovatif dan mampu berdikari meski di tengah keterbatasan. Di sisi lain, masih belum banyak WNI di Australia yang mengenal dan menekuni budaya-budaya asli Indonesia termasuk Wayang. Karena itu, diperlukan workshop tentang warisan budaya adiluhung Wayang yang dapat menjadi sarana *self-healing* dan modal pengembangan industri kreatif. Workshop dilaksanakan pada tanggal 14-15 Oktober 2021 secara daring melalui zoom meeting. Agenda ini diikuti oleh 32 peserta termasuk 2 peserta tambahan yang merupakan warga negara Republik Rusia. Pelaksanaan workshop dilakukan dengan metode ceramah, diskusi, demonstrasi, observasi, penugasan, dan evaluasi. Melalui evaluasi secara kuantitatif maupun kualitatif, dapat disimpulkan bahwa pelaksanaan kegiatan sudah mencapai kualitas yang baik dan efektif karena didukung oleh berbagai faktor, di antaranya adalah kepakaran anggota tim, kebutuhan terkini peserta dalam menghadapi pandemi covid-19, serta kerjasama yang baik dengan mitra IDN Victoria Australia. Kendala yang ditemukan terkait pelaksanaan praktek kreasi yang sulit dilaksanakan karena bentuk workshop daring. Pelaksanaan workshop ini diharapkan dapat berkelanjutan

**Keywords:** wayang corona, self-healing, ekonomi kreatif, pandemi Covid-19, diaspora Indonesia



# DIGITAL LITERACY DEVELOPMENT WITH EDUCATIONAL VIDEO MAKING TRAINING

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## Abstract

Digital literacy is one of the vital 21st century skills to master. Digital literacy can be applied in families, schools and communities. It is important to carry out activities aimed at developing digital literacy. The activity in question is in the form of training in making educational videos for members of the Salimah (Muslim Brotherhood) of Taiwan. This research was designed with a pre-experimental method with a one shoot case study design. The instruments used in this research are digital literacy questionnaires and product assessment sheets. The analytical techniques are descriptive qualitative and quantitative to prove and describe the effect of video-making training activities on digital literacy. The results showed that training in making educational videos could increase digital literacy by a gain score of 0.57 and an n-gain score of 0.39 (medium category). Educational video making training can improve digital literacy by showing that participants also have critical thinking for the purpose of actively and skillfully utilizing new interactive platforms, in the form of videos. This reflects the character of a person having digital literacy.

**Keywords:** digital literacy, educational video making training



# C-BIM DESIGN AND BUILD FOR SUSTAINABLE BUILDING PLANNING IN UNY

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## Abstract

In development requires an integrated planning master plan. This is necessary for the components connection. The purpose of this research is to produce a prototype of C-BIM which is integrated in a building, especially at Univeritas Negeri Yogyakarta. This is useful one of which is for budget efficiency to occur. This research was conducted by developing a prototype based on a real case of a project at UNY. The use of C-BIM resulted in an average cost efficiency of 15.69% on structural work and 6.69% on architectural work.

Keywords: c-bim, design and build, sustainable building, uny



# The Difficulties Of Learning Mathematics In Online Learning During Pandemic Covid 19

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## ABSTRACT

Online learning as a result of the COVID-19 pandemic, has led to various unexpected situations. Including learning school mathematics that requires a deeper explanation through face-to-face learning. Learning Mathematics online during the prolonged Covid-19 Pandemic is difficult for both teachers and students. A qualitative phenomenological approach through questionnaires and interviews with selected teacher and student participants was carried out in this study. The results showed that learning mathematics online was difficult for both teachers and students. This condition has an impact on students' mathematical achievement. Anxiety, difficulties and obstacles while learning mathematics online during the Covid 19 Pandemic which caused a decline in students' mathematics achievement showed low Mathematical Resilience of students. The teacher's knowledge of Mathematical Resilience is also very low so that the efforts made by the teacher so that students continue to have a positive attitude towards anxiety, difficulties and obstacles are not right on target. So that the distribution of information and knowledge about Mathematical Resilience and how to assess it is very important to mathematics teachers in Indonesia.

Keywords: Student Difficulties, Mathematic Online Learning, Pandemic Covid 19



# THE EFFECTIVENESS OF ACADEMIC SERVICES IN THE PANDEMIC OF COVID 19 AT UNIVERSITAS NEGERI YOGYAKARTA AND PUNJABI UNIVERSITI PATIALA INDIA

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## ABSTRACT

Therefore this research is intended to find out: 1) how the higher education responds to the current Covid-19 pandemic, and 2) how to compare the effectiveness of academic services in the Covid-19 pandemic era at Universitas Negeri Yogyakarta and Punjabi University Patiala India. This study used a survey method to extract data both qualitatively and quantitatively. The samples in this study were Yogyakarta State University and Punjabi University Patiala India which were taken by purposive sampling, focusing on the units of the Universitas Negeri Yogyakarta Postgraduate Program and in Punjabi Patiala India. Data collection techniques using FGD techniques, questionnaires, documents, observation, and interviews. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated using the informant review model and data triangulation. Quantitative data analysis using descriptive analysis techniques and qualitative data with an interactive analysis model. The results showed that UNY's response to the COVID-19 pandemic emergency situation was quite fast and responsive, so that service problems continued to run well through online services. While the effectiveness of general academic services shows that the average value of the assessment results is 3.98 which is between values  $> 3.5 - 4.2$  which means it is in the good category. While the results of the assessment of special services for lectures at UNY, the results show an average of 3.65 which is between values  $> 3.5 - 4.2$  which means that it is in the good category. These results indicate that UNY is ready and responsive to the Covid-19 emergency so that all services, both academic and non-academic, can be served well, even though they have not met expectations or the category is very good. Meanwhile, the effectiveness of general academic services in PUP India shows that the average value of the assessment results is 3.86 between values  $> 3.5 - 4.2$  which means it is in the good category. While the results of the assessment of special services for lectures at UNY, the results show an average of 3.65 which is between values  $> 3.5 - 4.2$  which means that it is in the good category. These results indicate that PUP India is ready and responsive to the Covid-19 emergency so that all services, both academic and non-academic, can be served well, even though they have not met expectations or the category is very good.

Keywords: effectiveness, service, academic, and higher education



# The Influence of Internal Motivation and Digital Literacy Towards Students' Proactivity

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Proactivity has been considered a crucial competency to support one's success and this study aims at determining the factors that affect it. By employing a quantitative method, it involved 132 students of Universitas Negeri Yogyakarta who participated in Phase 1 of the Teaching Campus Program. The data were collected using an online questionnaire. The data were analyzed by regression and the results showed that students' internal motivation and digital literacy had a positive and significant influence on their proactivity. It means, to enhance students' proactivity, their internal motivation and digital literacy need to be put forward. To stimulate students' internal motivation, they should be asked frequently about their learning goals and objectives in higher education, or their targets after graduation, while improving their digital literacy is by applying online learning (e-learning) in the classroom. The Massive Open Online Courses (MOOCs) learning system can also be implemented to improve digital literacy skills.

Keywords: Internal Motivation, Digital Literacy, Proactivity, Independent Campus, Kampus Mengajar



# KONSTRUKSI GENDER TOKOH PEREMPUAN SUPER DALAM CERITA RAKYAT INDONESIA DAN TRANSFORMASINYA DALAM KARYA SASTRA INDONESIA MUTAKHIR

Wiyatmi, Else Liliani, Esti Swatikasari

## Abstrak

Pada tahun ke-3 penelitian ini bertujuan untuk: mengimplementasikan hasil penelitian tahun pertama dan kedua dalam (1) pembelajaran sastra di kelas dan (2) masyarakat luas melalui forum ilmiah dan (3) mengabdikan pada masyarakat, dalam upaya mengkampanyekan pentingnya penanaman kesetaraan gender melalui pembelajaran dan forum ilmiah. Metode yang digunakan adalah action research dan workshop. Untuk mencapai tujuan penelitian (1) penelitian dilaksanakan di kelas Teori Sastra di Prodi Magister Pendidikan Bahasa dan Sastra Indonesia Universitas Negeri Yogyakarta antara September – Oktober 2021. Penelitian diawali mengumpulkan informasi tentang pemahaman mahasiswa terhadap teori feminisme, yang dilaksanakan sebelum tindakan, disusul dengan merancang tindakan, implementasi tindakan, dan evaluasi. Untuk mengimplementasikan hasil penelitian pada masyarakat luas dilaksanakan forum seminar nasional dengan yang akan dilaksanakan bulan September 2021 dan workshop metode penelitian kritik sastra feminis dengan sasaran dosen dan mahasiswa S1 dan S2 yang akan dilaksanakan 9 Agustus 2021. Luaran hasil penelitian: artikel jurnal internasional, prosiding seminar, dan book chapter.

Kata kunci: feminisme, gender, pembelajaran feminis, kritik sastra.





## **Pengembangan Kebijakan Resiliensi Sekolah Berbasis Kearifan Lokal untuk Mitigasi Bencana di Indonesia dan Covid-19**

**Siti Irene Astuti Dwiningrum; Dyah Respati Suryo Sumunar; Ebni Sholikhah**

Indonesia is the largest disaster-prone area in Southeast Asia. Most of the schools are located in disaster-prone areas. Schools have a strategic role in disaster mitigation but do not yet have a disaster mitigation policy or education in the era of the COVID19 pandemic. In fact, with knowledge and awareness about disasters, schools are bigger in terms of disaster mitigation. Resilience policy development schools are important and strategic for disaster mitigation and facing the COVID-19 pandemic. In addition, local wisdom can be used as a reference for developing the concept of developing resilience policies in schools.

This study uses a Research & Development approach with 4 D Models from Thiagarajan. The subjects of this study were principals, teachers, and high school students in 3 cities that have experienced major disasters, namely: Yogyakarta, Lombok, Aceh. Data mining by observation, interview, FGD. The study was designed for three years: the first year mapped the level of disaster knowledge, the level of awareness of ORID, a form of local wisdom that still survives extracted from teachers and students. The second-year focuses on model development and testing of animation products, and the third year: focuses on dissemination and training in disaster-prone schools in Indonesia. The outputs in the first year were a draft blend of school resilience development policies and a Scopus indexed international journal draft; the second year produced policy guidelines that were suitable for use in developing school resilience policies for disaster mitigation with the output of articles published by accredited international journals, animated products (4), and HAKI (6), the third year of dissemination to schools (SMA) in areas namely Lombok, Aceh, Yogyakarta, by producing reference books, policy briefs, international journals accredited Scopus, Edu-game (2), and HAKI (6). The results of the study can be used as a basis for implementing school policies in building resilience in schools and disaster mitigation education, while research products can be used as a basis for developing policy models in building school resilience for education disaster mitigation for the people of Indonesia. The results of the research if analyzed from the Level of Technology Readiness, hereinafter abbreviated as TKT, is the level of maturity or readiness of a research and development result. Technology that is measured systematically so that it can be adopted by users, whether by government, industry, or society, already meets TKT 7-8. It is proved that. The results of research outputs, both mandatory and additional outputs can be used independently optimally by all Indonesian people to increase knowledge of the importance of building school resilience for disaster mitigation. Likewise, product articles that have been published by Scopus indexed journals can be used as a source of reference on the importance of developing school resilience policies for disaster mitigation. As for research products in the form of guidebooks, research and theory-based reference books, animated story products and Edu-games can be used for learning about strengthening school resilience for disaster mitigation.

**Keywords:** Policy; Resilience; School; Mitigation; Edu-games; Local Wisdom.



## Character Construct of Youth Nationalism in Yogyakarta

Rukiyati, Amir Syamsudin, Shely Cathrin

Nationalism as the ideology and spirit of nationalism has an important role in perpetuating the existence of the life of the Indonesian state and nation. Indonesian youth are the nation's largest citizens compared to the previous generation. There are indications that young people who are often also called millennial generations who were born after the Reformation have loosened their spirit and sense of nationality due to various socio-cultural factors, namely economic factors, education, and religious beliefs. This study aims to find the construct of Indonesian youth nationalism and prove the hypothesis of the factors that influence it. The nationalism construct research method uses a quantitative approach. Data was collected using a Likert scale questionnaire. The data analysis method used descriptive statistics with percentages, assisted by the SPSS/Lisrel application. The research sample is purposive taken from five districts/cities in DIY. The sample size is 575 respondents. The results of the study show that religion influences nationalism significantly as much as 42.4% and the correlation is in the same direction. The economy influences nationalism significantly as much as 13.6% and the correlation is in the opposite direction. Social and cultural background influences nationalism significantly as much as 13.4% and the correlation is in the same direction. It can be concluded that religion and socio-culture have an important role in shaping the character of youth nationalism in DIY.

Keywords: character, nationalism, value, religion, youth, Yogyakarta.



## DEVELOPMENT OF 3D VIRTUAL STORYBOARD REALITY MEDIA PROTOTYPE HISTORY OF INDONESIAN CULTURE BASED ON ANDROID

Aman, LD. Prasodjo, R. Setiawan, S. Rosyadi

### ABSTRACT

The rapid development of technology and information in the Industrial Revolution 5.0 encourages the readiness of educational institutions to develop interactive and interesting learning media. Such efforts led to intense competition of technology products at regional and even international levels. Historical learning media that is considered ancient and boring makes students unmotivated in getting knowledge and materials about Indonesian history.

This research aims to develop a 3-dimensional interactive media *Virtual Storyboard Reality* (VSR) of Indonesian cultural history that provides an overview of the material visually from various sides. Student knowledge about cultural outcomes, especially in Javanese culture, is now less preferred. The development of VSR-based museums is important in an effort to increase student knowledge, especially in Indonesian cultural history courses.

The target of this research is the creation of a *Virtual Storyboard Reality* media of Indonesian cultural history based on android complete with a usage guidebook to improve the learning achievement of Indonesian cultural history courses that can be accessed by students and lecturers directly and at any time. Methods of product validation by media experts, and user tests. Cooperation involving partners of PT. Techno Radiance Indonesia to support media construction operations and provide facilities in product marketing.

Results show that: 1) product feasibility on the assessment of developed media experts reaches a feasibility index with a value of 3.88 (feasible); 2) product feasibility on expert assessment of developed material achieve a feasibility index with a value of 4.09 (worthy); 3) while the results of product evaluation with user rating with a value of 4.24 (very feasible). So that the 3D storyboard virtual reality product of Javanese cultural history is worth using and disseminating for the learning and strengthening of Indonesia's colonial history.

Keywords: virtual storyboard reality, history, culture, java



# The Feasibility of Android-Based Virtual Laboratory Media on Volcano Eruption Learning in Elementary Schools

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## ABSTRACT

Indonesia is one of the countries that have the most active volcanoes in the world, some of which are the strongest volcanic eruptions ever in the world. This is one of the considerations of the need for disaster education volcanic eruption in the school curriculum. In its implementation, it certainly requires an effective and efficient medium to be used in learning the new normal era today. Therefore, the purpose of this study is to find out the feasibility of android-based virtual laboratory media on volcanic eruption material for elementary school students. Research method is development research using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). Development research procedures that will be carried out in the first year starting from the needs analysis stage, the design stage, to the media development stage. Development products are validated by material experts, media experts, and learning experts in elementary school using different instrument validation sheets on each expert. Before the product validation process, the instrument validation process is carried out first. The results showed android-based virtual laboratory media is worth using in volcano eruption learning in elementary school 4th graders. Validation results by media experts showed that the developed product achieved an average score of 4.86 so that it falls into the category of "very good", while the validation results by material experts obtained an average score of 4.43 so that it falls into the category of "very good", and the validation results of learning experts in elementary school obtained an average score of 4.65 included in the category of "very good". Teacher responses related to practicality of product use reached an average score of 4.88 with an "very good" category, while student responses related to practicality of product use reached an average score of 3.02 so that it falls into the category of "good". Thus android-based virtual laboratory media developed in the category are feasible and can be used in the learning of volcanic eruption materials for elementary school students.

**Keywords:** Media Eligibility, Virtual Labs, Android-Based Media, Volcano Eruptions, Elementary Schools



## Abstract

Misconceptions occur because of initial understanding difference with the final understanding after the learning process. Science learning may elicit misconception for student. Misconception often occurs in matter Newton Law, kinematic, superposisi, kind of force, mechanic, gravitation, force and motion, earth and space, photosynthesis, equilibrium. The research discuss the misconception in thematic learning material about motion. The research used interview and drawing method. The data collecting technique in this research used test drawing motion, interview and documentaion. Sample research was 87 students in elementary school teacher education. The result showed that the misunderstanding level of students was 54.02%. The students who drew and their explanations were not appropriate with the concept of motion were 36.80%. Students who did not answer were 1.20%. Students who drew and their explanation was representative from one scope of the science learning were 3.45%. The students whose pictures and representative explanations were more than one scope of the science learning were 1.20%. Students who drew and had comprehensively representative explanations in one scope of the science learning were 3.45%. This research was an integrated material in the science for all material in our life. Students still experience misconceptions about motion. Needed to develop ways to overcome them for further research.

**Keywords:** Misconception, Figure, Motion



# The Indonesian Language Module for Thai Speakers to Academic Purposes

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## ABSTRACT

The purpose of this study is to develop an Indonesian language module for Thai speakers with an academic purpose with a focus on grammar. In addition, this study aims to test the feasibility of the developed module. The method used is RnD with ADDIE model. Data collection techniques using questionnaires, interviews, and due diligence. Data analysis using descriptive. The results showed that 57% of respondents stated that grammar is the most difficult material in learning Indonesian. Learning the target language does take a lot of practice. Some aspects of grammar in BIPA class material for academic purposes based on interviews with BIPA teachers can be mapped in the realm of phonology, morphology, syntax and semantics. Module development tailored to the needs of learners. The results of the module validation from material experts and BIPA learning experts show that the developed module is very good so it is worthy to be tested on BIPA students in Thailand.

**Keywords:** BIPA for Thai students, academic purposes, grammar material



# Development of Variable Speed Drive Training Kit as a Media of Motor Control Practice in Vocational Education

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## ABSTRACT

This study aims to determine the performance and level of feasibility of a variable speed drive training kit for electric motor control practice media. This type of research is research and development with the ADDIE model. The stages of development are Analyze, Design, Development, Implementation, and Evaluation. Feasibility testing is conducted by validation of the material experts, media experts validation and testing to the user. The results of this research produced a unit of Training Kit Variable Speed Drive module using Altivar 71. Based on tests, Training Kit Variable Speed Drive can work well. Feasibility test results from media experts are included in the very feasible category with a percentage of 97.19%. The results of the feasibility test from the material experts are included in the category of very feasible with a percentage of 94.17%. Feasibility test results from users are included in the very feasible category with a percentage of 91.85%.

**Keywords:** Motor control, Training kit, Variable speed drive



# INNOVATION OF SNACK BAR MADE FROM LOCAL FOOD AS A STAMINA RECOVERY ALTERNATIVE FOR SPORTS DURING THE COVID-19 PANDEMIC

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## Abstract

This research was conducted with the aim of supporting local food based on food security which has the potential as a source of energy and protein. The aims of this research were: 1) Find a recipe for a snack bar made from corn and tempeh, 2) Find out the nutritional content of a snack bar made from corn and tempeh, 3) Packaging and labeling snack bars made from corn and tempeh, 4) Calculate the selling price of snack bars made from corn and tempeh, 5) Knowing the level of people acceptance of snack bars made from corn and tempeh.

This research will use the Research and Development (R&D) method, with a 4D development model (Define, Design, Development and Dissemination). The research was on March-October 2021. The research was carried out at the Culinary Laboratory, Faculty of Engineering, UNY. Data analysis used descriptive statistics and t-test. The research was conducted for 10 months to produce a snack bar that was rich in energy and protein, has an attractive packaging and is liked by people. This Snack Bar product can not only support the improvement of health status but also can realize food self-sufficiency with local food-based.

Based on the stages of product development of UNY Bar with tempeh substitution, the conclusions were obtained: 1) The final result of the UNY Bar recipe was 75% tempeh: 25% corn chips 2) The results of the nutritional analysis of UNY Bar showed that every 100 grams contained 2.12% ash. , 9.96% fiber, 4.77% water, 20.13% fat, 10.56% protein, 51.81% carbohydrates, and 430 cal Energy. 3) The packaging use aluminum foil to keep the product safe and labels with elegant designs add to the public's attractiveness. 4) One pack of UNY Bar is sold for Rp. 4.200, - 5) People acceptance of the results of acceptance testing of UNY Bar products which include color, aroma, texture, taste and overall favored or good received.

**Keywords:** Innovation, Snack bar, Local food, Stamina recovery, Sports, Covid-19.





# Pre-Service Chemistry Teachers' Skills in Integrating Science, Technology, Engineering, and Mathematics (STEM): A Case for Vocational School

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## Abstract

This research aimed to explore pre-service chemistry teachers' (PSCTs') (1) prior knowledge, (2) developments of Pedagogical Content Knowledge (PCK), and (3) factors that obstructing them in integrating Science, Technology, Engineering, and Mathematics (STEM) based chemistry learning at vocational school. A qualitative research with an instrumental case study was conducted. The case was PSCTs' experience in integrating STEM based chemistry learning at vocational school through learning tools development. PSCTs that enrolled in Vocational Chemistry course with a total of 27 third-year students became the participants of this study. The data were collected through pre and post open-ended questions and lesson plan based on STEM approach. The data that collected were analysed using qualitative content analysis with the combination of interpretative and inductive coding. The results of this research revealed that: (1) PSCTs have known the basic concept about STEM however they lack in giving an example of STEM based chemistry learning, (2) a slight improvement of PSCTs' PCK were identified after they were participated in this research, (3) the most factors that obstructing PSCTs' in integrating STEM based chemistry learning at vocational school was on relating the chemistry content and students' vocational expertise. This research revealed that PCK for chemistry integrated STEM development needs considerable time and supports. Therefore, PSCTs' requires more chances in designing STEM-based chemistry learning at vocational school when they were participated in the teacher preparation program.

**Keywords:** STEM, pedagogical content knowledge, vocational school, pre-service chemistry teachers



# **The Modification Of Bloom Taxonomy Theory for Construct Music Competency Based on Mapping in Indonesia, France, & the Netherlands**

**Kun Setyaning Astuti, Wiel Veugeliers, Marlene, Alice Armini,, Chantal Pelhate, Hanna Sri Mudjilah**

Taxonomy of Bloom' theory has been "blaring" all over the world, especially in education since 1956 to the present day. Bloom, Simpson, and Krathwohl classified learning achievement into three domains that are cognitive, psychomotoric, and affective. In a memorandum circa (1971) Bloom, Hasting and Madaus stated that ideally each major field should have its own taxonomy of objectives in its "own language" with possible new categories as appropriate. In the reality the Bloom's taxonomic theory that has survived almost after the century was only recently revised in the early 21st century by Anderson. Until now the taxonomy development in the field of music particularly in psychomotoric and affective domain has not been done. Therefore the long term aim of this research is to develop a music competency standard that can be used as a benchmark for the development of music learning materials base on Bloom's theory. The specific objectives of the study are: 1) to develop Bloom-Anderson-Simpson-Krathwohl Taxonomy Theory for psychomotor aspects in music; 2) to develop the taxonomy theory of Krathwohl affective domain for Music's expression; 3) to develop the common ground of music learning materials appropriate for all the diverse genre of music in Indonesia; 4) to develop a music competence standard for Basic school, Junior High School and High school. The stages and analysis of first year the research is 1) developing the Common ground of musical ability; 2) developing music competence standard based on Bloom- Anderson-Simpson and Krathwohl taxonomy on psychomotoric and affective domain using the Delphi technique; 3) Developing the instrument; 4) conducting observations on the students' musical ability in the first and second years of the elementary schools, and the first year of junior and senior high schools in Indonesia, France, and the Netherlands; and 5) Analyzing sequence of musical ability of the students from the elementary to senior high schools. The stages and analysis on the second year is 6) developing the competence standard based on the analysis of the accordance of the musical competence standard developed from empirical data from the first year by exploratory factor analysis; 7) conducting observations on the musical ability of the students from the third and fourth year of elementary schools, and the second year of junior and senior high schools in Indonesia, France, and the Netherlands; 8) Analyzing the sequence of the musical ability from the elementary to senior high schools using the Cohort technique. Meanwhile the stages and analysis in the The Third Year is 9) Developing the competence standard based on the analysis of the musical competence standard developed using the empirical data from the second year; 10) conducting observations on the musical ability of the students in the fifth and sixth year of the Basic school and third year in junior and senior schools in Indonesia, France, and the Netherlands; 11) Analyzing the sequence of the music ability from the elementary to senior high schools using the Cohort technique; 12)Analyzing the development of the musical ability of the students using the Time Series technique; 13) Developing the musical competence standard by confirmatory analysis; 14) Test the competency difference of each level by MANOVA analysis. The outcomes of this research are 1)the first year, article publication in the International Journal of Music Education; 2) in the second year, article publication in International proceedings of music education, 3) in the third year, article publication in international journal of education, and 4) produce an music competency standard of public school from Basic school to High School.

Key words: Modification; Bloom ; Music ; competencies;



# The Determinant Factors on User Satisfaction in Assessing the Quality of Online Education Management Information System

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## Abstract

This study aimed to determine the quality of online education management information system in Indonesia or known as *Sistem Data Pokok Pendidikan* (DAPODIK), and the factors which make it important based on the perspectives of the user or the operator of the system. In this study, a combination of Technology Acceptance Model (TAM) and End-User Computing Satisfaction (EUCS) were used in measuring the effectiveness of the system in influencing user acceptance and user satisfaction. The population in this study consisted of the users of DAPODIK in elementary schools in Indonesia. Meanwhile, the samples were selected from several public and private elementary schools in Special Region of Yogyakarta, Indonesia. The analysis technique applied in this study was Partial Least Square-Structural Equation Modeling (PLS-SEM), conducted by implementing two stages of measurement, namely outer model analysis and inner model analysis. As a result, the attitudes perceived by the users when using DAPODIK are it is simplifying and speeding up their work, increasing their performance and productivity, easier to be learned, accessed, and operated by the users, which has influences on the users' acceptance and satisfaction.

**Keywords:** education management information system, online system quality, user acceptance, satisfaction.



# Rancang Bangun Reaktor Mini Berbasis Gelombang Ultrasonik untuk Produksi Graphene sebagai Bahan Dasar Elektroda Transparan

Ariswan, Fika Fauzi, Sumarna, Citta Mudita, Zen Nurulalawy Istiqomah

## Abstract

The research activities focused on two activities, namely: (1) Realization of an ultrasonic wave-based LPE reactor that can be varied in power, time and reaction temperature. (2) The optimization process for the synthesis of graphene material from graphite powder using a ready-made LPE reactor. The realization of the ultrasonication tool that can be varied with several parameters (power, time, and temperature) has been successfully carried out even though it involves a third party in the procurement. This is due to the Covid-19 pandemic, which limits the working time of tools in the laboratory. However, the research team succeeded in conducting research on the production of nanomaterials and multi-layered graphene using the ultrasonication device. The results of research on the production of nanomaterials in the form of nanoemulsions have been presented and published at the international conference ICRIEMS 2021 (International Conference of Research Implementation on Education Mathematics and Sciences 2021). The result of the next research is the study of the effect of ultrasonication power and time parameters on the efficiency of graphene production from graphite powder. From this study it was found that high power equivalent to 300 W can be used to peel off graphite in a short time, 10 minutes while for low power equivalent to 50 W it can be used to peel off graphite in 240 minutes. In addition, a study of the effect of pretreatment on graphite before the ultrasonication process was also carried out in this study. The result is that the treatment of micowave radiation makes it easier for graphite to be peeled off using the ultrasonication method. These results are being prepared for publication.

In the future, research on the effect of graphite concentration on efficient peeling time needs to be done to get a more comprehensive picture of this ultrasonic peeling method. In addition, research on the morphology and quality of the resulting graphene still needs to be done.

Keywords: liquid phase exfoliation, ultrasonic wave, graphene



# THE DEVELOPMENT OF MULTIDIMENSIONAL ISLAMIC RELIGIOSITY MEASUREMENTS FOR CHARACTER EDUCATION

## Abstract

**Mami Hajaroh; Siti Irene Astuti Dwiningrum; Rukiyati**

Religiosity is a core value in the national and state character education in Indonesia. It is one of the state's foundations, namely Belief in the One and Only God, which necessitates the measurement of Islamic religiosity value to develop character education, especially for Muslims. In addition, its position as an important element in character education, a theoretical concept, and a basis for developing a measurement scale, still provide discussion opportunities. Therefore, this research aims to find a tested construction of Islamic religiosity theory as a basis for developing valid and reliable assessment and evaluation instruments. This value is relatively permanent in an individual and forms one's character, which can be understood positively as a measurable phenomenon from the educational process. Meanwhile, qualitative meta-analysis was employed by conducting a systematic analysis of research results using interpretive methods (Andreassen et al., 2007; Da Costa et al., 2016). The samples used involved articles on religiosity and character education from 1950-2021. Subsequently, the results showed that religiosity and character are multidimensional and can be cross-combined to build a new concept involving 3 components with 6 dimensions. These are the moral component of knowing, comprising intellectuality or cognition, the feeling aspect, including belief, commitment, and experience, while action encompasses worship/ritual practices and consequences. Conversely, the multi-component and multi-dimensional character education describe the complexity and comprehensiveness of the religiosity and character theory constructs.

Keywords: theory; religiosity, religiosity measurement scale; Islam; metaanalysis



# Speech Emotion Recognition for Javanese Language based on Deep Learning

## Abstract:

Javanese is one of the regional languages in Indonesia which is most widely used among other regional languages. Emotions can be recognized one of them from someone's speech. Currently there is no data base related to Javanese speech to recognize emotions. This paper aims to build a database of emotional speech in Javanese. The recording involves actors who are used to playing dramas who are members of the UNY kama setra community. Recording is done in a place that is safe from distractions and free from noise. Six kinds of emotions have been simulated by the actors of Kamasetra (UNY theater group), which include happy, sad, fear, anger, neutral and surprise. The actors involved are ten people with the age of 20-30 years, consisting of five men and five women. The database that has been built is verified both by humans (who have a Javanese mother tongue), as well as verification using machine learning. The results show that the database is feasible to be used as emotion recognition in Javanese.

**Keywords:** Speech Emotions Recognition, Data base, Java language



# Student's Behavior and Performance in Online Learning: the Role of Social Media YouTube as a Learning Source

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## Abstract

Online learning has developed rapidly. In contrast to its rapid development, the effect of online learning has not been shown to be satisfying, especially from the student's point of view. Online learning is often associated with social media. The significant increase in social media use has had varied impacts. This study focuses on YouTube as a learning resource / media for transferring knowledge on online learning. YouTube, which has been widely used by educators as a learning resource, is considered to have great potential to influence changes in student learning behavior. This is explanatory research, using a quantitative approach with a survey method. The data in this research was collected using an online questionnaire, on students of the Faculty of Economics, Yogyakarta State University and students of the Faculty of Business and Management, University of MARA Shah Alam-Malaysia. There are two main findings in this study. First, students' intrinsic factors, attitudes and self-efficiency, influence student learning behavior and performance. Second, students' self-efficacy in online learning is proven to mediate the relationship between students' attitudes towards YouTube as a learning resource with student behavior and performance.

**Keywords:** Student's behavior, student's performance, online learning, YouTube as a learning source



# Student Engagement in Online Learning Questionnaire Validation using Rasch Analysis within Winsteps.

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## Abstract

Student engagement in online learning needs to be measured to assess the quality of online learning. This work was done to develop a questionnaire to measure student engagement in online learning. Initially, 24 items were developed based on online learning context and the four dimensions of student engagement, which consist of cognitive, social, emotional, dan behavioral engagement. All items were measured using a five-point Likert scale. Experts reviewed the items, revisions were conducted based on experts' appraisal. Then, Rasch analysis was conducted to determine the construct validity and reliability. There were 117 undergraduate students who participated in the trial phase. Based on the Rasch analysis using Winsteps, the item and person reliabilities are 0.98 and 0.82, respectively. The item reliability can be considered as very good. The item and person separation indexes are 6.37 and 2.15, respectively. The mean-square (MNSQ), standardized as a z-score (ZSTD), and point measure correlation were used as criteria to refine items. There are 19 items fit with the MNSQ and ZSTD requirements. Hence, the final developed questionnaire consists of 19 items. In the future work, the developed questionnaire will be used to assess the quality of online learning model that will be designed and implemented.

Keywords— student engagement, online learning, Rasch analysis, Winsteps





**NO TITLE**

**NO NAME**

**Abstract**

Education is a right that must be obtained by every Indonesian citizen as stipulated in the 1945 Constitution Article 31. This is the basis for Indonesia to work more closely with the Malaysian government regarding the education of the children of Indonesian workers in the country. Community Learning Center (CLC) is a collaboration between oil palm companies and the Indonesian government. The oil palm company is obliged to provide a place of learning and facilities to support the teaching and learning process at CLC and appoint at least one teacher to teach, while the Government of Indonesia will send professional teachers from Indonesia and send other educational assistance. This research will focus on mapping the needs of CLC managers to be able to develop CLC in accordance with quality standards so that the output of CLC is also quality. This research is a qualitative research using the case study method. Forms of data collection in case studies are documentation, archival records, interviews, observations, and physical or cultural devices. Furthermore, the stages of data analysis through pattern matching, explanation building, time series analysis, logic models, and cross case synthesis.

The results show that the majority of learning citizens in CLC are migrant workers from Indonesia who work in oil palm plantations, CLC has an early childhood education program and also equality, the most basic needs needed by CLC in Sabah are related to education and mastery of subjects for residents. learning, community management and learning approaches to society.



# DEVELOPING E-STEM PROJECT-BASED LEARNING MODEL TO IMPROVE STUDENTS' ICT LITERACY COMPETENCY AND PROBLEM-SOLVING

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## Abstract

This study aims to: 1) determine the learning design of the E-STEM project-based learning model in science learning to improve ICT literacy and problem-solving skills, 2) determine the feasibility and effectiveness of learning using the E-STEM project-based learning model in science learning to improve ICT literacy and problem-solving skills. This research applies the design of development research stages according to Branch including analyze, design, development, implementation and evaluation. Data collection techniques are using instruments in the form of questions, questionnaires and product validation sheets. Analysis of qualitative data is done through content analysis techniques while quantitative data were analyzed by using descriptive statistics. The results showed that the design of the E-STEM project-based learning model in science learning was proven to have a good level of validity, feasibility and effectiveness to improve ICT literacy and problem-solving skills. The conclusion of this study is that the design of the E-STEM project-based learning model in science learning and its supporting devices is feasible to use to improve ICT literacy skills and problem-solving abilities with good categories. The E-STEM project-based learning model in science learning can improve the effectiveness of learning in the classroom.

**Keywords:** e-stem project-based learning model, ict literacy, problem-solving.



**NO TITLE**

**NO NAME**

**Abstract**

The study aimed to determine the effectiveness of the Electronic Record Information System for Education (ERISE) program on improving the learning outcomes of the skills aspects among students of Vocational School of Automation and Office Management Program (AOMP) in managing electronic filing. The study used a quasi-experimental method with a one-group pretest-posttest design. The population was class X of the Vocational School of AOMP in the Special Region of Yogyakarta and Central Java Province. The sample selection technique used a purposive sampling technique with a total of 104 students as the sample. Data collection techniques were tests and documentation. The data analysis techniques were descriptive analysis and non-parametric statistical analysis with the Mann-Whitney U test. Based on data analysis, it concluded that 1) there was a significant difference in learning outcomes in skills aspects before and after using ERISE, and 2) there was an increase in learning outcomes of skills aspects by 72.96% before and after using ERISE. Based on the finding, the (ERISE) application can be used as a practicum media of digital filing for the new normal period.

Key words: electronic filing, ERISE, skills



# Adaptive Fuzzy Logic Controller To Adjust The BLDC Motor Speed

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## Abstract

Persons with disabilities have mental, intellectual, physical, and sensory limitations for a long time and have difficulty participating in social activities in the community and their environment. All the shortcomings experienced by a person with a physical disability understand that a person has limitations in movement function, including wilting or stiff paralysis, paraplegia, cerebral palsy, due to amputation, and so on, so that these people need a wheelchair. This study aims to produce an algorithm used to regulate the speed of a BLDC motor that will be used in wheelchairs for people with disabilities. This study uses the Mamdani fuzzy method, while the speed response test will be generated using a simulation on MATLAB/SIMULINK. There are several results from this study, namely: 1) In tests carried out with no load (reference 25cm), it resulted in a reasonably rapid increase in time so that the overshoot was minimal and resulted in some delay time at the 9<sup>th</sup>, 15<sup>th</sup>, and 21<sup>st</sup> seconds; 2) In tests carried out with a load and given a change in time on one side of the inlet, the output response is operating smoothly, only 0.2cm; 3) Fuzzy logic used in this system changed several constants, resulting in a change in the error value with a minimal delta error of 2%.



# PENGEMBANGAN METODE LATIHAN SIRKUIT UNTUK PHYSICAL ABILITY PEMAIN TENIS MEJA

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## Abstrak

Kemampuan fisik aerobik, anarobik, kekuatan, reaktif agility, power dan koordinasi penting untuk pemain tenis meja. Salah satu metode latihan sirkuit untuk meningkatkan. Namun metode latihan sirkuit untuk meningkatkan kemampuan fisik tenis meja secara serempak isu penting dalam tenis meja yang perlu dicari solusinya. Berdasarkan wawancara beberapa pelatih tenis meja membutuhkan metode latihan gabungan dan alat penilaian yang sesuai untuk pemain tenis meja. Namun alat ukur penilaian yang valid dan reliable untuk reaktif agility dan koordinasi pemain tenis meja belum ada, yang ada alat ukur tes reaktif agility untuk sepak bola, Handball dan bulutangkis. Berdasarkan fakta-fakta tersebut di atas maka peneliti berkeinginan meneliti dengan judul Pengembangan Metode Latihan Sirkuit untuk Physical Ability Pemain Tenis Meja.

Tujuan umum penelitian ini adalah untuk pengembangan metode latihan sirkuit untuk meningkatkan kemampuan fisik (physical ability) pemain tenis meja. Sedangkan tujuan khusus penelitian ini untuk (1) Tahun pertama untuk mendeskripsikan kemampuan dan kebutuhan pelatih tenis meja di Indonesia serta mengembangkan draf metode latihan sirkuit kontinyu dan interval untuk kemampuan fisik tenis meja, (2) Tahun kedua untuk uji ahli dan uji coba draf metode latihan sirkuit kontinyu dan interval untuk kemampuan fisik khusus tenis meja yang dikembangkan, dan (3) Tahun ketiga untuk menguji pengaruh metode latihan sirkuit kontinyu dan interval untuk kemampuan fisik khusus tenis meja.

Prosedur penelitian tahun pertama ada dua langkah, yaitu langkah pertama studi pendahuluan menggunakan metode penelitian surve mendeskripsikan kemampuan dan kebutuhan pelatih tenis meja di Indonesia sebagai dasar pengembangan draf metode latihan sirkuit kontinyu dan interval untuk kemampuan fisik tenis meja. Jumlah subyek penelitian adalah 263 pelatih tenis meja di Indonesia yang terdiri dari 173 pelatih minimal sudah pernah melatih di daerah selama 3 tahun atau membawa atlet pertandingan tingkat provinsi, dan 90 pelatih minimal sudah pernah melatih selama 5 tahun atau pernah membawa atlet pertandingan tingkat nasional. Pengumpulan data menggunakan angket (melalui goggle form). Analisis data menggunakan deskriptif kuantitatif presentase. Langkah kedua studi sistematik literature review meta-sintesis untuk mengembangkan draf metode latihan sirkuit kontinyu dan interval untuk kemampuan fisik (biomotor) tenis meja. Subyek penelitian adalah jurnal-jurnal internasional yang terindek. Pengumpulan data melalui searching di internet (PubMed, MEDLINE dan lain-lain). Dalam penelitian ini menggunakan pendekatan meta etnografi. Analisis data bersifat induktif interpretif.

Hasil penelitian langkah pertama menunjukkan bahwa pelatih tenis meja indonesia yang memiliki pengalaman melatih selama 3 sampai 5 tahun atau pernah melatih tim untuk persiapan pertandingan ke tingkat propinsi memiliki tingkat pemahamannya tentang: (1) konsep latihan sirkuit, konsep latihan interval, konsep latihan plyometrik untuk meningkatkan kemampuan fisik pemain tenis meja pada umumnya kurang paham (89%, 91%, 98%) dan pelatih kurang paham konsep penilaian dengan tes dan penilaian dengan non tes (observasi atau otentik). Hasil penelitian ini juga menemukan pada umumnya pelatih tenis meja di Indonesia membutuhkan instrumen tes reaktif agility, power tungkai, speed dan membutuh penelanaan non tes yaitu penilaian instrument observasi dan otentik. Hasil penelitian ini juga menemukan pelatih tenis meja di Indonesia membutuhkan metode baru latihan sirkuit, latihan interval, latihan plyometrik dan latihan gabungan dua metode atau lebih.



Hasil penelitian langkah kedua telah ditemukan secara konsep dan kajian penelitian terdahulu draf bentuk latihan dan program gabungan latihan plyomertik dengan metode latihan sirkuit kontinyu untuk meningkatkan physical ability pemain tenis meja, (2) Telah ditemukan secara konsep dan kajian penelitian terdahulu draf bentuk latihan dan program gabungan latihan sirkuit interval 30 detik, 60 detik, 90 detik dengan latihan plyomertik untuk meningkatkan physical ability pemain tenis meja.

Kata kunci: Kemampuan dan kebutuhan pelatih, metode latihan Sirkuit , pemain Tenis meja



# Pengembangan *Mobile Assessing (M-Assesing)* Berbasis Teori Tes Modern untuk Menilai *Higher Order Thinking Skills (HOTs)* Fisika Pada Mahasiswa

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## Abstrak

Penggunaan teknologi dalam penilaian hasil belajar merupakan bagian dari salah satu perubahan masyarakat di bidang pendidikan pada masa revolusi digital ini. Secara khusus pada masa pandemic Covid-19 penggunaan teknologi sangat dibutuhkan dalam menyambut sistem kenormalan baru (*new normal*). Potensi penggunaan *mobile assessing (M-assesing)* berbasis teknologi bergerak baik komputer dan seluler pribadi dapat menjadi peluang dalam dunia pendidikan, Membangun dan mengembangkan konstruksi soal-soal pada media *M-assesing* untuk menilai HOTs fisika taksonomi SOLO pada mahasiswa yang valid menjadi tujuan dalam penelitian ini. Adapun metode penelitian ini menggunakan metode pengembangan (*Reseach Development*). Instrumen soal dikembangkan dalam 2 aspek yaitu *reliabel* dan *extended abstrack* dengan sub aspek mengaplikasikan, menganalisis, mengintegrasikan, menggeneralisasikan dan membangun teori. Soal di bangun dalam 2 paket, dengan jumlah soal perpaket sebanyak 30, dengan 6 buah butir soal anchor. Soal yang dikemabngkan untuk mengukur kemampuan HOT mahasiswa dibut dalam bentuk pilihan ganda bertingkat Four tier test, dengan jaman dan alasan dan tingkat keyakinan setiap jawaban. Sehingga akan didapatkan 16 variasi penskoran jawaban yang akan dianalisa dengan menggunakan metode Partial Credit Models.

Katakunci : penelitian pengembangan, *four tier test*, teori tes modern



# DAMPAK PENDEKATAN HEUTAGOGY TERHADAP TANGGUNG-JAWAB BELAJAR DARING PADA MATA KULIAH STATISTIK

Endang Mulyatiningsih; Sugiyono; Ngabdul Munif,

## Abstrak

Penelitian ini bertujuan mengetahui: (1) tanggung jawab belajar dan; (2) dampak positif, negatif dan pengiring yang terjadi setelah pembelajaran Statistik menggunakan pendekatan heutagogy. Penelitian menggunakan metode evaluasi dampak dengan model *goal free evaluation*. Populasi penelitian ini adalah 104 mahasiswa yang mengambil mata kuliah Statistika pada Semester Ganjil 2020. Sampel dipilih menggunakan teknik sistematis sebanyak 82 mahasiswa. Data penelitian dikumpulkan dari dokumen nilai dan tugas, wawancara dan kuesioner tanggung-jawab belajar. Kualitas instrument dikendalikan menggunakan validitas butir dan konsistensi internal dengan teknik belah dua (awal dan akhir). Keabsahan data kualitatif dikendalikan dengan cara triangulasi dokumen dan wawancara. Hasil penelitian menunjukkan: (1) tanggungjawab belajar paling tinggi terdapat pada usaha belajar, kemudian diikuti disiplin, kemandirian, motivasi dan kejujuran; (2) dampak positif dirasakan mahasiswa kelompok atas karena lebih sukses belajar kapan saja dan dimana saja, dampak negative dirasakan kelompok bawah karena membuka peluang untuk mencari contoh jawaban teman. Dampak pengiring terjadi kerja sama dalam menghadapi kesulitan

**Kata kunci:** heutagogy, tanggungjawab, motivasi, disiplin dan kejujuran akademik





# Distance Learning in Physical Health and Sports Education at Primary Schools During the COVID-19 Pandemic

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## Abstract

This study aims to determine the pattern of distance learning carried out by Physical Health and Sports Education teachers in elementary schools in Yogyakarta. Sequential explanatory design is used with quantitative and qualitative research approaches that are carried out sequentially. This research aims to analyze the need for developing learning media that can be used online, offline and blended learning. From the analysis of existing learning patterns, it shows that most of the teachers at D.I. Yogyakarta has met the standards of distance learning implementation. However, the development of learning media on certain materials still needs to be done in supporting each material delivery activity carried out by the teacher. The survey results show that most teachers still use teaching materials in print or electronic form and existing learning videos. The results of in-depth interviews indicate that there is still a need to develop learning media on the material of athletic activities, self-defense, physical fitness development activities, gymnastics, rhythmic motion, water activities, personal safety, and a healthy lifestyle. With the results of this analysis, it is hoped that it can provide ideas and inspiration for further research in developing learning media, especially Physical Health and Sports Education in elementary schools, so that educational goals towards the era of society 5.0 involving various technological developments can be achieved optimally both in emergency and normal conditions.

**Keywords:** distance learning; Physical Health and Sport Education; primary school; pandemic COVID-19.



# STABILISASI LOGAM DALAM SENYAWA KALSIMUM SILIKAT SEBAGAI SUATU USAHA MENGENDALIKAN PENCEMARAN LINGKUNGAN

A. K. Prodjosantoso, dan M. Pranjoto Utomo

## Abstrak

Dikalsium silikat ( $\text{Ca}_2\text{SiO}_4$ ) adalah salah satu senyawa pembentuk semen Portland. Padatan  $\text{Ca}_{2-x}\text{Sr}_x\text{SiO}_4$  dapat terbentuk jika senyawa  $\text{Ca}_2\text{SiO}_4$  terselit Sr. Penelitian ini bertujuan untuk mengetahui reaksi hidrasi senyawa  $\text{Ca}_{2-x}\text{Sr}_x\text{SiO}_4$ .

Tahap yang dilakukan pada penelitian ini adalah reaksi hidrasi senyawa  $\text{Ca}_{2-x}\text{Sr}_x\text{SiO}_4$  dengan air dalam lingkungan gas nitrogen dan dilanjutkan dengan kalsinasi serta karakterisasi senyawa menggunakan metode XRD, FTIR, TGA-DSC, dan SEM-EDX.

Analisis XRD menunjukkan adanya senyawa  $\text{Ca}_{3-x}\text{Sr}_x\text{Si}_2\text{O}_7 \cdot 3\text{H}_2\text{O}$  dan  $\text{Ca}(\text{OH})_2$ , serta  $\text{CaCO}_3$  sebagai produk reaksi antara  $\text{Ca}(\text{OH})_2$  dan  $\text{CO}_2$  yang dibuktikan berdasarkan data TGA. Kalsinasi  $\text{Ca}_{2-x}\text{Sr}_x\text{SiO}_4$  terhidrasi menghasilkan senyawa  $\text{Ca}_3\text{Si}_2\text{O}_7$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{CaCO}_3$ , dan  $\text{CaO}$ . Terdapat indikasi adanya ikatan antar atom Si-O *stretching*, O-Si-O *stretching*, O-H *stretching*, Ca-O *stretching* dan C-O (*bending* dan *stretching*) pada sampel berdasarkan analisis data FTIR. Morfologi permukaan sampel dideskripsikan berdasarkan data SEM-EDX.

Kata kunci: Hidrasi,  $\text{Ca}_{2-x}\text{Sr}_x\text{SiO}_4$ ,  $\text{Ca}_{3-x}\text{Sr}_x\text{Si}_2\text{O}_7 \cdot 3\text{H}_2\text{O}$ ,  $\text{Ca}(\text{OH})_2$ .



# MODEL AKTIVITAS JASMANI DAN OLAHRAGA UNTUK KESIAPSIAGAAN REMAJA DALAM MENGHADAPI BENCANA

## Abstrak

Letak geografis Indonesia yang berada pada lempengan besar dunia dan *pacific ring of fire* menyebabkan sebagian besar wilayah Indonesia memiliki tingkat kerawanan bencana yang tinggi. Hal ini menunjukkan diperlukannya peningkatan kesiapsiagaan berbagai unsur masyarakat melalui pendekatan dalam pembelajaran pendidikan jasmani dan olahraga. Oleh karena itu, penelitian ini bertujuan untuk menginisiasi pemenuhan kebutuhan kesiapsiagaan remaja di daerah-daerah tingkat kerawanan bencana tinggi untuk memperoleh produk model aktivitas jasmani yang mengintegrasikan pendidikan jasmani dan olahraga dengan kesiapsiagaan remaja dalam menghadapi bencana. Penelitian dan pengembangan ini terdiri atas studi pendahuluan dan pengembangan. Studi pendahuluan meliputi studi pustaka dan lapangan (analisis kebutuhan) sedangkan pengembangan meliputi menyusun draft produk model aktivitas jasmani yang kemudian dilakukan uji kelayakan dengan validasi ahli untuk merevisi produk awal yang telah disusun. Ahli yang akan dilibatkan adalah bidang pendidikan jasmani dan olahraga, mitigasi bencana, dan psikologi remaja. Guru PJOK SMP di daerah rawan bencana akan menjadi praktisi yang menguji kelayakan produk. Analisis data dilakukan secara kualitatif dan kuantitatif. Hasil penelitian ini terdiri atas hasil studi pustaka, studi lapangan, dan produk buku aktivitas-aktivitas jasmani untuk kesiapsiagaan remaja. Hasil uji kelayakan produk dengan melibatkan ahli dan praktisi memperlihatkan bahwa 50 aktivitas jasmani yang dikembangkan dapat digunakan dalam pembelajaran pendidikan jasmani dan olahraga di Sekolah Menengah Pertama.

Kata Kunci: Aktivitas Jasmani, Olahraga, Kesiapsiagaan, Bencana, Remaja



# PRINCIPALS LEADERSHIP MODEL THROUGH FUN AND EFFECTIVE WAY AT VOCATIONAL HIGH SCHOOL 5 YOGYAKARTA AND VOCATIONAL HIGH SCHOOL 6 YOGYAKARTA

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## Abstract

This study aims to determine 1) how the principals' leadership model is fun and effective at Vocational High School 5 Yogyakarta; 2) how is the principals' leadership model fun and effective at Vocational High School 6 Yogyakarta so far; and 3) how the comparison of the principals' leadership model is fun and effective at Vocational High School 5 and Vocational High School 6 Yogyakarta. The method used was qualitative research. This research was carried out with a research case at Vocational High School 5 and Vocational High School 6 Yogyakarta with consideration of the quality of the subject. Data collection techniques used were FGD, questionnaires, documents, observations and interviews. The validity and reliability of the questionnaire instrument conducted by expert validation. The validity of the qualitative data was validated by an informant review model, and data triangulation. Analysis of quantitative data conducted through descriptive analysis techniques and qualitative data conducted through interactive analysis models. The results show that the implementation of fun school at Vocational High School 5 and Vocational High School 6 Yogyakarta focus on substantive matters, including a) the leadership of the principals have shown their performance well as a leader, manager, servant, and as a servant for all school members. Therefore, the principal are able to empower the potential of the school to make the school implementation is in fun atmosphere; b) the leadership model applied is a structural leader where educators and education staff at Vocational High School 5 and Vocational High School 6 Yogyakarta are quite good, not only regarding the qualifications of educational background, but also adequate teacher competence; c) the comparison between Vocational High School 5 and Vocational High School 6 Yogyakarta is balance in term of learning activities. Besides, teachers of Vocational High School 5 and Vocational High School 6 Yogyakarta have good didactic-methodical abilities. Teachers are able to design planning, implementation, and evaluation in a coherent-integrative manner, so they have good performance and impact on good students' achievement. The impact of teacher performance is that Vocational High School 5 and Vocational High School 6 Yogyakarta are the leading vocational schools in Yogyakarta.

**Keywords:** model, leadership, principal



# **Adaptive Fuzzy Logic in Intelligent Electric Drive Add-On for Diffable Wheel Chair**

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## **Abstrak**

Penyandang disabilitas adalah setiap orang yang mengalami keterbatasan fisik, intelektual, mental, dan/atau sensorik dalam jangka waktu lama yang dalam berinteraksi dengan lingkungan dapat mengalami hambatan dan kesulitan untuk berpartisipasi secara penuh dan efektif dengan warga negara lainnya berdasarkan kesamaan hak. Keterbatasan yang dialami seorang penyandang disabilitas fisik memiliki pengertian bahwa seorang mengalami gangguan fungsi gerak, antara lain lumpuh layu atau kaku, paraplegi, cerebral palsy (CP), akibat amputasi, stroke, kusta dan lain-lain yang membutuhkan kursi roda. Tujuan penelitian ini adalah mengembangkan penggerak tambahan untuk kursi roda berupa motor BLDC yang di kendalikan menggunakan algoritma Fuzzy Adaptive. Komponen pendukung penggerak elektronik kursi roda antara lain : Motor BLDC, Battery Li-Ion 15Ah, BLDC Controller, dan Kerangka Penghubung Body dengan Kursi Roda. Motor BLDC yang digunakan berukuran 5inch dengan daya sebesar 350W dan tegangan 36V. Kendali kecepatan menggunakan Arduino Mega. Algoritma pengendalian kecepatan motor menggunakan Fuzzy Adaptive. Fuzzyfikasi menggunakan 6 derajat keanggotaan himpunan fuzzy, Moel Fuzzy menggunakan metode mamdani dan defuzzyfikasi menggunakan Center of Average. Pengujian respon kecepatan dilakukan dengan cara pembebanan motor BLDC dan lakukan pencacatan kecepatan melalui Hall sensor Motor BLDC.



# **Ambidexterity Behavior Of Creative SMEs For Disruptive Flows Of Innovation: A Comparative Study Of Indonesia And Taiwan**

## **Abstract**

The era of disruptive innovation forces small business managers to innovate by carrying out exploitation and exploration activities simultaneously. Ambidextrous is a person's ability to use his two hands equally. This study aims to examine the influence of the manager's social network on the manager's ambidexterity orientation and its impact on SMEs' innovation performance. This study uses two moderating variables, which are sourced from the manager's internal factors, namely proactive and commitment to innovation. The study population was small and medium enterprises in the creative manufacturing sector in Indonesia and Taiwan. The analytical method is SEM-PLS. The total sample gathered was 101 from Indonesia and 123 from Taiwan. The results support the construct in both countries. The result of multiple group analysis shows that Indonesia has greater Ambidexterity, Commitment to Innovation and Innovation performance when compared to Taiwan.

Keywords: ambidexterity, managerial social networks, proactive managerial, commitment to innovation, innovation performance, SMEs



# Marine Edutourism Learning Model to Improve Environmental Literacy

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## Abstract

The sea covers 70 percent of the earth's land and 77 percent of Indonesia's territory is sea. Indonesian sea is world biodiversity hotspot and has potential for world marine tourism. However, damage to marine ecosystems continues to occur due to human activities that have low environmental literacy. Environmental education is needed to improve students' marine environmental literacy from an early age. The sea as a marine ecotourism object has potential as resources of environmental learning. Utilization of this potential can be done through marine edutourism (ME). This study aims to develop a ME model as an alternative to environmental education that can improve students' marine environmental literacy. It's a research development using Design and Developmental Research (DDR) method. Results of this study are components of ME learning model, in the form of learning syntax, social systems, reaction principles, support systems, instructional impacts, and accompaniment impacts. The development of model is based on experiential learning model and joyful learning strategy. ME syntax consists of leisure, experiencing, reflecting, processing, generalizing, and testing in new situations. Instructional impact that will be achieved is an increase of environmental literacy in issue analysis domain that plays a role in students' pro-environmental action decisions. Materials in this model are mangrove ecosystems, seagrass beds, beaches, coral reefs, local wisdom of coastal communities, marine cultivation, and marine conservation efforts. The conclusion of this research is production of ME learning model called Experiential and Joyful Learning-Marine Edutourism (EJoy-ME) which is proven can improve environmental literacy in issue analysis domain.

**Keywords:** Marine Edutourism, Environmental Literacy, Environmental Education, Analysis Skill



# **PBL-HL Model Oriented to Socio- Scientific Issues on the Teaching of Ecosystem to Improve the Conceptual Knowledge and Environmental Literacy of High School Students**

## **Abstract**

This study aims to: (1) develop a valid PBL-HL Model oriented to socio-scientific issues in teaching Biology to high school students to improve their conceptual knowledge and environmental literacy, (2) reveal the practicality of the developed PBL-HL model.

The development model adapts the ADDIE model which consists of the stages of analysis, design, development, implementation, and evaluation. The subjects of the experiment were grade X students of high schools in Aceh Besar District, which is located in the coastal area. Aiken's V formula is applied to determine the feasibility of the model and to regulate the differences.

The results of this study are as follows. (1) The developed PBL-HL model oriented to socio-scientific issues is valid based on the assessment of the validator and practitioner with a very good category. The empirical tests are declared feasible by validators and practitioners with a good category. (2) The developed model is practical based on limited trials with a high category and broad trials with a very high category. The combination of learning models with traditional Acehnese customs and using social science issues that exist in the surrounding environment can benefit students to gain an understanding of the subject matter from local cultural values, and increase conceptual knowledge and environmental literacy.

**Keywords:** conceptual knowledge, environmental literacy, PBL-HL model, socio-scientific issues





# KONSTRUKSI IDENTITAS PEREMPUAN INDONESIA DALAM KOMIK STRIP BERTEMA VAKSIN COVID-19 DI INSTAGRAM: KAJIAN WACANA KRITIS

Ahmad Wahyudin, Setyawan Pujiono, Yayuk Eny Rahayu, Else Liliani

## Abstrak

Penelitian ini bertujuan untuk menjelaskan konstruksi identitas perempuan Indonesia dalam komik strip bertema vaksin COVID-19 di Instagram. Penelitian ini adalah penelitian deskriptif kualitatif dengan menggunakan pendekatan wacana kritis. Objek penelitian ini adalah cerita bergambar berwujud komik strip bertema vaksin COVID-19 yang dapat ditemukan dalam instagram di Indonesia. Data dikumpulkan dengan teknik merekam gambar, kemudian mencatat dan menganalisisnya sesuai rumusan permasalahan. Teknik analisis data dilakukan secara kualitatif, menggunakan validitas semantis, serta reliabilitas interrater dan intrarater. Hasil penelitian mengenai konstruksi identitas perempuan Indonesia dalam komik strip bertema vaksin COVID-19 di Instagram lebih dominan bernilai positif daripada negatif. Ditemukan tiga belas sikap perempuan yang merepresentasikan konstruksi identitas bernilai positif, yaitu: 1) kritis, 2) optimis, 3) peduli, 4) respek, 5) disiplin, 6) sabar, 7) nasionalis, 8) pendengar yang baik, 9) responsif, 10) profesional, 11) pengingat, 12) berani, dan 13) penyemangat. Selain itu, ditemukan lima sikap perempuan yang merepresentasikan konstruksi identitas bernilai negatif, yaitu: 1) cemas, 2) apatis, 3) bebal, 4) kurang pengetahuan, dan 5) penakut.

**Kata kunci:** konstruksi identitas, perempuan, komik strip, instagram, analisis wacana kritis



# PENGEMBANGAN METODE SELF BODY WEIGHT TRAINING UNTUK MENINGKATKAN KEBUGARAN JASMANI DI MASA PANDEMI COVID 19

## Abstrak

Kebugaran jasman saat ini menjadi sangat penting untuk menghadapi penyebaran COVID 19 ini. Sebagai upaya preventif maka diperlukan sebuah aktifitas fisik yang dapat membantu meningkatkan kebugaran jasmani. Saat ini seluruh warga masyarakat Indonesia diwajibkan untuk melakukan protocol kesehatan dan social distance, sehingga perlu pemilihan aktifitas fisik yang mengedepankan anjuran tersebut. Aktifitas fisik yang dapat dilakukan secara mandiri dan dilakukan dirumah saja adalah senam, jogging latihan *body weight*. Oleh karena itu peneliti bermaksud melakukan riset berupa Pengembangan Metode *Self Body Weight Training* untuk meningkatkan Kebugaran Jasmani Di Masa Pandemi Covid 19.

Penelitian ini merupakan penelitian pengembangan dengan Metode deskriptif prosedural yang menggariskan langkah-langkah yang harus diikuti untuk menghasilkan produk. Pengembangan Metode *Self Body Weight Training* untuk meningkatkan Kebugaran Jasmani Di Masa Pandemi Covid 19 ini dilakukan 9 langkah yaitu: 1) Studi Pendahuluan, 2) Desain Draf Awal, 3) Validasi Draf Awal, 4) Uji Coba Skala Kecil, 5) Revisi Produk, 6) Uji Coba Skala Besar, 7) Revisi Produk, 8) Pembuatan Produk Akhir, 9) Uji kelayakan Produk. Subjek penelitian dan pengembangan ini adalah ahli materi, instruktur dan member Data dikumpulkan melalui angket dan data observasi. Data berupa hasil penilaian mengenai produk, saran untuk perbaikan produk serta data kualitatif digunakan untuk merevisi produk. Teknik analisis data dalam penelitian ini menggunakan uji kelayakan.

Berdasarkan hasil perhitungan validitas menggunakan Indeks Aiken's V didapatkan hasil dari 10 item pernyataan didapatkan skor V terendah sebesar 0,857 dan skor V tertinggi sebesar 1,000. Penarikan kesimpulan valid atau tidaknya item dilakukan dengan cara membandingkan skor V hasil perhitungan dengan nilai V tabel. Nilai V tabel untuk item yang dinilai oleh 7 rater/validator dengan 5 alternatif pilihan skala pada taraf signifikansi 5% didapatkan nilai V tabel sebesar 0,750. Dapat disimpulkan seluruh item mempunyai skor V lebih besar dari V tabel (0,750), artinya seluruh item dinyatakan valid. Berdasarkan hasil uji validitas tersebut, dapat disimpulkan bahwa metode *self body weight training* dinyatakan valid ditinjau dari kejelasan sasaran, kejelasan takaran latihan, metode sesuai kebutuhan, metode membantu mempermudah latihan, metode mudah dilakukan, metode menarik, panduan mudah dipahami, metode dapat membantu meningkatkan kebugaran, metode aman dan metode bisa untuk pemula maupun sudah terlatih.

Kata kunci: Latihan beban, body weight training, masa pandemic



# Pengembangan nanofiber berbasis selulosa dari limbah ampas tebu (*Saccharum officinarum* L.) dan limbah rumah tangga melalui aplikasi nanopartikel logam sebagai bahan masker disinfektor

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## Abstrak

**Latar belakang** dari penelitian yang dilakukan yaitu tingginya kebutuhan akan masker disinfektor untuk aplikasi di bidang medis maupun nonmedis yang disebabkan oleh adanya pandemi virus corona di Indonesia yang belum kunjung mereda serta minimnya ketersediaan masker disinfektor kualitas unggul dengan sifat antivirus, antibakteri, serta antijamur. Dengan demikian kebutuhan akan masker kain disinfektor merupakan hal yang tidak dapat ditawar lagi. Masker yang bersifat disinfektan ideal merupakan agen antimikroba yang dirancang untuk menonaktifkan atau menghancurkan mikroorganisme. Kebutuhan masker kain yang terbuat dari material dengan karakteristik dapat menghancurkan bakteri, jamur, dan virus dengan cepat merupakan suatu kebutuhan yang sangat mendesak. Latar belakang berikutnya adalah pentingnya dilakukan pemanfaatan limbah ampas tebu dan limbah rumah tangga yang akan mencemari lingkungan, padahal ampas tebu masih memiliki kandungan selulosa cukup tinggi sekitar 30% yang dapat diisolasi dan diubah menjadi nanoselulosa. Pengolahan limbah ampas tebu dan limbah rumah tangga menjadi nanoselulosa sebagai bahan masker akan menjadikan limbah tersebut menjadi material bernilai ekonomi tinggi serta dapat menjaga lingkungan dari pencemaran. **Tujuan penelitian** ini adalah untuk mengembangkan bahan masker disinfektor berbasis selulosa dari limbah ampas tebu dan limbah rumah tangga seperti air cucian beras, air rebusan singkong, dan air kelapa dengan penambahan kitosan dan pemlastis serta nanopartikel logam berupa nanopartikel perak, seng oksida, dan tembaga oksida pada nanoselulosa. Penelitian akan dilakukan selama 2 tahun. **Tahun I** telah dilakukan preparasi biomaterial nanoselulosa dengan cara memodifikasi selulosa yang diperoleh dari limbah ampas tebu dan dari beberapa limbah rumah tangga sehingga berukuran nano. Selanjutnya nanoselulosa dimodifikasi melalui penambahan kitosan dan pemlastis. Nanoselulosa dan biokomposit nanoselulosa setelah dimodifikasi dengan kitosan dan pemlastis dikarakterisasi meliputi UV-VIS, kristalinitas, gugus fungsi, sifat termal, analisis *Scanning Electron Microscopy* (SEM), *Transmission Electron Microscopy* (TEM), dan aktivitas antimikroba terhadap bakteri dan jamur.



# Dampak Pandemi Covid-19 terhadap Kepedulian Lingkungan, Tanggung Jawab Sosial, dan Kebiasaan Konsumsi Makanan Pada Generasi Z

Muniya Alteza, Penny Rahmawaty, Lina Nur Hidayati, Arum Darmawati, Nindya Nuriswati Laili

## Abstrak

Penelitian ini bertujuan untuk mengetahui dampak pandemi Covid-19 terhadap karakter kepedulian lingkungan, karakter tanggungjawab sosial, dan kebiasaan konsumsi makanan pada generasi Z. Selain itu juga dimasukkan variabel gender sebagai variabel moderasi.

Penelitian ini merupakan penelitian kuantitatif dengan teknik analisis *Simple Regression Analysis* untuk menguji dampak pandemi Covid-19 terhadap kepedulian lingkungan, tanggungjawab sosial dan kebiasaan konsumsi makanan pada generasi Z. Sedangkan untuk efek moderasi menggunakan *Moderated Regression Analysis*.

Hasil pengujian dalam penelitian ini menunjukkan bahwa pandemi Covid-19 mempengaruhi perilaku kepedulian lingkungan, tanggungjawab sosial dan kebiasaan konsumsi makanan. Sedangkan faktor gender tidak terbukti memoderasi pengaruh pandemi dengan ketiga perilaku tersebut. Temuan penelitian ini diharapkan dapat menjadi *role model* untuk pengembangan perilaku masyarakat dalam menghadapi pandemi.

Kata kunci: Pandemi Covid-19, kepedulian lingkungan, tanggungjawab sosial, kebiasaan konsumsi makanan, generasi Z



# PENGARUH MODIFIKASI HABITAT DENGAN PERLAKUAN *TRAP CROP* TANAMAN BERBUNGA TERHADAP VISITASI SERANGGA POLINATOR PADA PERTANAMAN CABAI

Tien Aminatun, Yunita Fera Rahmawati, Budiwati

## Abstrak

Selain berpengaruh terhadap serangga hama, perlakuan *trap crop* dengan tanaman berbunga juga dilaporkan dapat mempengaruhi visitasi serangga polinator. Oleh karena itu, tujuan dari penelitian ini adalah untuk menganalisis pengaruh modifikasi habitat dengan perlakuan *trap crop* tanaman berbunga (kenikir dan matahari) terhadap visitasi serangga polinator pada pertanaman cabai. Penelitian eksperimen ini dilakukan di kebun percobaan Fakultas Pertanian UGM di Banguntapan, Bantul. Variabel bebas dari penelitian ini adalah jenis tanaman *trap crop*, yaitu tanaman bunga kenikir dan bunga matahari. Masing-masing perlakuan terdiri atas 5 plot ulangan, dengan luas plot seragam ( $4m^2$ ). Sebagai kontrol adalah plot tanpa *trap crop*. Peletakan plot secara random. Saat tanaman cabai mulai berbunga, selama 7 hari diamati variabel terikatnya, yaitu keragaman serangga polinator yang berkunjung pada bunga tanaman cabai maupun *trap crop*, dan *longevity*-nya. Semua pengamatan dilakukan untuk setiap plot. Saat tanaman cabai panen maka dihitung berat basah buah cabai per plot sebagai hasil panen. Analisis data keragaman dengan rumus Indeks Diversitas Shannon-Wiener. Uji beda dilakukan dengan ANOVA untuk mengetahui ada tidaknya perbedaan antarperlakuan terhadap visitasi serangga polinator. Hasil penelitian menunjukkan bahwa perlakuan dengan *trapcrop* bunga kenikir mempunyai indeks keragaman dan indeks evenness dari serangga polinator yang mengunjungi bunga tanaman cabai adalah yang tertinggi dibanding perlakuan lain. Akan tetapi bunga kenikir ternyata lebih menarik bagi pollinator dibandingkan bunga tanaman cabai, sehingga indeks keragaman, evenness maupun jumlah individu serangga yang mengunjungi bunga kenikir lebih tinggi daripada pollinator yang mengunjungi bunga cabai.

Kata kunci: *trap crop*, visitasi, serangga polinator, pertanaman cabai



# THE USE OF SACCHARUM OFFICINARUM BAGASSE AND CHICKEN EGGSHELLS TO SYNTHESIS CALSIUM SILICATES

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## Abstract

Calcium silicate is one of the cement components that can be synthesized by using calcium oxide (CaO) and silica (SiO<sub>2</sub>) derived from limestone and sand, respectively. The precursors used to synthesize calcium silicate are extracted by mining which may damage the environment. The purpose of this study was to synthesize calcium silicate compounds by replacing limestone and clay with organic materials to reduce environmental problems.

Potential precursors to synthesis of calcium silicate compounds are broiler chicken eggshells and green sugarcane wastes. Calcined broiler chicken eggshells contain mainly solid calcium oxide (80% of CaO), and the calcined bagasse contain 66.70% of silica (SiO<sub>2</sub>). In this study, broiler chicken eggshells were calcined at 800 °C for 10 hours to decompose calcium carbonate (CaCO<sub>3</sub>) to calcium oxide (CaO), while bagasse was calcined at 800 °C for 4 hours to produce silica (SiO<sub>2</sub>).

Calcium silicate was synthesized using the solid state reaction method of stoichiometric mixtures of calcium oxide (CaO) dan silica (SiO<sub>2</sub>) at a varied temperature of 950 °C, 1000 °C, and 1050 °C. The calcined products were characterized using XRD, FTIR, TGA-DSC, and SEM-EDX methods. In general, the samples contain two main phases of calcium silicate, namely Ca<sub>2</sub>SiO<sub>4</sub> (larnite) and Ca<sub>3</sub>SiO<sub>5</sub> (alite). The mole percentage of calcium silicate increases with the increasing synthesis temperature and the calcined broiler chicken eggshell used as precursor.

Keyword : calcium silicate, SiO<sub>2</sub>, CaO, calcination.



# The Impact of Zoning System New Students Enrollment on the Instructional Leadership Capacity of General High School Principals in Special Region of Yogyakarta

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## Abstract

Improving the quality of education in Indonesia based on increasing the instructional leadership capacity of principals is an important issue in the field of school education management. This study aims to determine the impact of zoning system new students enrollment on the instructional leadership capacity of general high school principals in the Special Region of Yogyakarta. This research was conducted with a descriptive research approach. The research subjects were 66 public general high school teachers in the Special Region of Yogyakarta with purposive non-probability sampling technique based on regency area, school status, and school accreditation category. The research instrument consists of three aspects of the instructional leadership capacity of principals, namely the defining the school's mission, the managing teaching programs, and the developing a positive school learning climate. The measurement results obtained that the coefficient of the questionnaire validity test results for each aspect was 0.937 to 0.967; 0.758 to 0.905; and 0.609 to 0.920, while the value of the reliability coefficient for each aspect is 0.970; 0.962; and 0.950. The results showed that there was a significant impact of the zoning system new students enrollment on the instructional leadership capacity of general high school principals in the Special Region of Yogyakarta in three aspects, namely: 94.03% on the aspect of defining the school's mission, 85.65% on the aspect of managing the teaching programs, and 82.09% on the aspect of developing a positive school learning climate.

**Keywords:** Zoning system new students enrollment; Instructional leadership capacity; General High School



# The Validity and Reliability of the Immune Status Questionnaire and The Effectiveness of Self-Massage Against Immunity in the COVID-19 Era

Novita Intan Arovah, dkk

## Abstract

Immunity is one of the key factors in the transmission of COVID-19. Therefore, it is necessary to make efforts to improve the immune status and monitoring or assessment of immune status. Massage has the potential to increase immunity. However, so far, the effect on immune status is unknown in the era of the COVID-19 pandemic. So far, questionnaire instruments to measure immune status, including the Immune Status Questionnaire (ISQ), have not been tested for validity and reliability in Indonesia. This study aims to adapt ISQ into Indonesian and test the validity and reliability of the Indonesian version of the ISQ instrument, as well as test the effectiveness of self-massage in increasing body immunity, as part of efforts to prevent the spread of COVID-19.

Cross-cultural adaptation of the Immune Status Questionnaire follows the instrument cross-cultural adaptation protocol of Sousa & Rojjanasrirat (2011). The ISQ instrument validation process involved 296 Indonesian adults (58% female, mean age=45±19 years) who filled out the instrument online. 102 participants (34%) of them refilled the ISQ one week later for a test and retest to calculate intraclass correlation. Internal consistency reliability was assessed in both surveys using Cronbach's alpha. Test and re-test reliability was calculated using the intraclass correlation coefficient for ISQ items and the Kappa Cohen coefficient for ISQ scores, perceived general health, perceived immune function, perceived decreased immune function and chronic disease. Construct validity was calculated using confirmatory factor analysis. Convergent validity was calculated using the correlation test between ISQ scores and the SF-12 component (quality of life instrument) and divergent validity was calculated using the correlation test between ISQ items. The self-massage effectiveness test was conducted using a Randomized Control Trial design involving 52 subjects which were divided into a self-massage treatment group and a control group. Different tests were conducted between the pretest and posttest and between the control group and the treatment group with a different test, according to the distribution of the data.

The reliability of the ISQ's internal consistency in the first and second surveys showed good scores, namely 0.87 and 0.82. Each ISQ item showed excellent test and retest reliability ( $r = 0.70$  to  $0.88$ ). The confirmatory results from the confirmatory factor analysis showed a good fit with  $RMSEA = 0.069$  after model modification, indicating adequate construct validity. The correlation among the ISQ components and between the ISQ and the SF-12 component also shows adequate convergent and divergent validity. The results of the effectiveness test showed a significant improvement in ISQ after self-massage only in the treatment group, from a mean score of 7.81 to 6.46 ( $p=0.015$ ). This study provides evidence that adaptation of the Indonesian Immune Status Questionnaire is a reliable and valid measure of immune status for Indonesian adults. This study also shows that self-massage can improve the body's immune status as measured by using the Indonesian adaptation of the Immune Status Questionnaire.

**Keywords:** validity, reliability, immune status questionnaire, cross-cultural adaptation, Indonesia, adults, self-massage, perceived immune status.





# THE ROLE OF KELOMPOK KERJA GURU (KKG) IN IMPROVING THE QUALITY OF LEARNING IN ELEMENTARY SCHOOL

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## Abstract

Improving learning outcomes through educational reform can be realized through the KKG. The trick is to absorb as much information as possible about educational reform formats and strategies which can then be applied or practiced in their respective schools. Differences in teaching materials resulted in differences in teaching aids used. KKG has an important role in improving the quality of learning. The aims of this research are to: 1) find out how the existence of the Kelompok Kerja Guru (KKG) in elementary schools so far, 2) find out how the role of the Kelompok Kerja Guru (KKG) in elementary schools improves the quality of learning, 3) find out the empowerment of the Kelompok Kerja Guru (KKG) in elementary schools so far. This study uses a survey method to collect data both qualitatively and quantitatively. The sample in this study was the Kelompok Kerja Guru (KKG) involving elementary schools in Sleman which was taken by purposive sampling, considering cluster 1, cluster 2, and cluster 3 elementary schools. Data collection techniques used FGD techniques, questionnaires, documents, observations, and Interview. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated by using an informant review model and data triangulation. Analysis of quantitative data with descriptive analysis techniques and qualitative data with interactive analysis models. The results of the study show that: 1) the existence of the Kelompok Kerja Guru (KKG) in elementary schools so far has existed as a forum for organization and discussion forums for cognate teachers, 2) the role of the Kelompok Kerja Guru (KKG) in elementary schools in improving the quality of learning is manifested in the form of KKG strategic programs, namely routine work meetings, development of learning tools, implementation of trainings, instrument development, module preparation, and determination of minimum completeness criteria, 3) Empowerment of Kelompok Kerja Guru (KKG) in elementary schools so far through the support of school principals towards KKG programs involve time support for the implementation of the KKG program and funding support.

Keywords: role, KKG, quality, learning.



# THE DEVELOPMENT OF INDONESIAN FLASHFICTION 2010 – NOW

Else Liliani, Kusmarwanti, Dwi Budiyo

## Abstract

This study aims to explain (1) the development of the structure of flash fiction in Indonesia in 2010 – present, (2) writers of flash fiction in Indonesia, (3) the development of the media used for publication of flash fiction in Indonesia, and (4) reader acceptance of Indonesian flash fiction .

This research is a qualitative descriptive study. The data sources of this research are fiction mini on social media, namely Twitter, Facebook, and Instagram. This flash fiction is then analyzed for the development of its structure, writers, media, and reader acceptance using literary reception theory. The reliability of the data was carried out through interrater and intrarater while the validity of the data was tested through semantic validation and triangulation between researchers.

The results of the study are as follows. First, the structure of the flash fiction is strongly influenced by the publication media platform used. In flash fiction there are (a) compaction of the structure of the flash fiction story, (b) the story building elements are shown very concisely and are not developed in a complex manner, (c) the exploration of linguistic aspects is very dominant, (d) the use of language style is carried out optimally with an effective and concise narrative. , (e) ending stories tend to be processed with interesting surprises, (f) story themes are very diverse and follow the dynamics of actual issues on social media. Second, fictionmini in Indonesia is growing through the Twitter account @fiksimini which was initiated by Agus Noor, Eka Kurniawan, and Clara Ng. There are many writers and novice writers who write mini-fictions based on topics provided by the moderator, which will then be retweeted by the moderator. Agus Noor sets out the dictums of flash fiction works that deserve to be retweeted. Third, social media that is a means of publishing flash fiction s include Twitter, Facebook, and Instagram. The fictionmini community from various regions becomes a support system that organizes various trainings, writing discussions, and publishing books. Fourth, passive acceptance of fiction mini on social media is indicated by the number of likes and short comments. Active acceptance of mini-fiction is carried out in the form of (1) active public involvement in producing mini-fiction writings and their contribution in reviving the mini-fiction community and (2) research, writing criticism or literary essays, both scientifically and non-scientific.

Keywords: flash fiction , social media, development



# **DEVELOPMENT OF DOLANAN ANAK' SONG LEARNING METHODS FOR THE PRESERVATION OF TRADITIONAL ARTS AND THE INCULCATION OF EDUCATIONAL VALUES IN THE NEW NORMAL ADAPTATION ERA THROUGH EASTERN (INDONESIA) AND WESTERN (USA) APPROACHES**

**Kun Setyaning Astuti, Jiu-Ching Wang Northern Illinois University USA, Trie Hartiti Retnowati Sutyono, Endang Nurhayati, Anarbuka Kukuh Prabawa, Nicholas Ferdeta Lakusa**

The aim of the study are 1) to find out how to develop digitized Javanese children's game songs; 2) To find out the appropriate learning method used to learn Javanese children's game songs in this new normal era based on eastern and western approach; 3) To find out the typical characteristics of educational values that can be taught through Javanese children's game songs; 4) To obtain information how the Javanese children's game songs affect the development of children's attitudes and behavior.

This empirical study use a quantitative approach and an experimental method. The independent variable of this research is digitized Javanese children's game songs, and the dependent variable is the ability to these songs and the children's characters, which are reflected in cognitive (knowledge), psychomotor (skills), and attitude (affective) aspects



# DEVELOPMENT OF E-SCIENCE TEACHING MATERIALS APPROACHED NOS WITHIN INQUIRY AND ITS EFFECT TO 21ST CENTURY SKILLS

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## Abstract

The aims of this research are to: (1) produce science-based electronic teaching materials (e-teaching materials) with an inquiry approach containing Nature of Science (NoS) that are appropriate according to experts and teachers; (2) produce prototypes of science teaching materials with an inquiry approach containing NOS. This study is a follow-up to the results of preliminary research on inquiry profiles and literacy of junior high school students which showed that most of the categories were quite good (on a scale of 3).

The preparation of learning tools will be carried out through Research and Development (R & D) following the 4-D model (Define, Design, Develop, and Disseminate). Learning tools that will be developed include e-science teaching materials in the form of Student Activity Sheets (LKPD). Product validation of e-science teaching materials was carried out through reviews by two experts. Data regarding the quality of the learning tools developed were collected using a review sheet. Data on the teacher's perspective on understanding NoS, learning experiences with inquiry, and 21st century skills were collected through a questionnaire. Data on the quality of e-teaching materials were collected using expert and teacher validation questionnaires. The teacher's perspective data, the results of the validation of learning tools, and the results of observations were analyzed descriptively.

The results showed that most science teachers still did not understand that the main purpose of learning science, the understanding of NoS that science teachers had, there were still some mistakes, and the experience of teaching 21st century skills still needed to be optimized. The expert stated that the product developed was declared suitable for use in science learning. In addition, the expert also suggested improvements on the content side in the form of formulating learning indicators, writing NoS content, and part of the activity steps in the form of formulating hypotheses or predictions as well as some writing improvements that were not in accordance with good and correct Indonesian language rules. The product is repaired based on expert advice.

**Keywords:** 21<sup>st</sup> century skills, NoS, inquiry



# VALIDATION OF TECHNOPRENEURSHIP SKILL QUESTIONNAIRE (TSQ): A VOCATIONAL STUDENT PERSPECTIVE IN PANDEMIC COVID-19

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## Abstract

Technopreneurship skill sangat diperlukan dalam pengembangan wirausaha teknologi di era industri 4.0. Oleh karena itu, menguasai technopreneurship skill sangat diperlukan khususnya bagi siswa SMK. Banyak penelitian yang meneliti tentang technopreneurship skill, tetapi belum ditemukan bagaimana mengukur technopreneurship skill menurut persepsi siswa SMK di masa pandemi. Penelitian ini melibatkan 620 siswa SMK negeri dan swasta di Yogyakarta, Indonesia. Data dikumpulkan secara proporsional random dengan menggunakan kuisisioner online dengan google form. Validasi angket menggunakan teknik analisis Aiken V dan analisis CFA dengan software AMOS. Studi ini menunjukkan bahwa persepsi siswa SMK tentang tecnopreneurship skill dapat dijelaskan dengan indikator: entrepreneur personal skill, technological skill, learning skill, bussiness management skill, dan collaborative and communication skill. Technopreneurship Skill Questionnaire (TSQ) terdiri dari 19 item yang terdiri dari entrepreneur personal skill (EPS) 4 item, technological skill (TS) 5 item, learning skill (LS) 3 item, business management skill (BMS) 4 item, dan collaborative and communication skill (CCS) 3 items. Semua item memiliki nilai validitas dan reliabilitas yang baik. Temuan ini memberi implikasi bagi praktisi pendidikan kejuruan untuk perbaikan lebih lanjut. Praktisi kejuruan khususnya guru kewirausahaan SMK juga dapat menggunakan kuisisioner ini untuk mengevaluasi kompetensi siswa di bidang wirausaha teknologi.

**Keywords:** technopreneurship skill, vocational student, entreprneurship, CFA



# ANDROID-BASED LEARNING LEADERSHIP MODEL FOR PRINCIPALS OF SENIOR HIGH SCHOOL IN SPECIAL REGION OF YOGYAKARTA

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## Abstract

The aims of this study were to: (1) find out how the android-based school principal learning leadership assessment model is needed as an effort to improve the performance of high school teachers in DIY, (2) find a decent android-based school principal learning leadership assessment model as an effort to improve the performance of high school teachers. This study uses the Research and Development method which consists of four stages, namely: the preliminary stage, the planning stage, the trial stage, evaluation and revision, and the implementation stage. The trial subjects in this study were carried out in three stages, namely preliminary trials involving 10 experts and education practitioners. Data collection techniques using FGD techniques, questionnaires, documents, observations, and interviews. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated by an informant review model, and data triangulation. Analysis of quantitative data with descriptive analysis techniques and qualitative data with interactive analysis models. The results of the study indicate that: 1) an android-based learning leadership assessment model for principals as an effort to improve the performance of high school teachers in DIY is very necessary. The level of importance according to users, namely the head of the DIY education office with a score of 4.28, school supervisors with a score of 4.42, and education experts with a score of 4.26 with a mean score of 4.32, the model is very important and necessary, 2) an Android-based learning leadership assessment model for principals that is feasible as an effort to improve teacher performance. SMA based on the assessment of 10 experts showed an average score of 3.78 which means that the developed model is included in the feasible category.

Keywords: assessment, learning, and teacher performance



# PROFILE OF HOLISTIC HIGHER ORDER THINKING SKILLS IN SOLVING ENVIRONMENTAL PROBLEMS AMONG UNDERGRADUATE STUDENTS OF BIOLOGY AND BIOLOGY EDUCATION PROGRAMS IN YOGYAKARTA

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## Abstract

This study aims at determining the ability of holistic higher-order thinking skills (HOTS) in solving environmental problems among undergraduate students of biology and biology education programs in Yogyakarta. The research employed a survey method where the sample was taken using a purposive sampling technique, i.e. only undergraduate students of biology and biology education programs who have passed environmental theme courses, such as environmental science, environmental biology, or environmental education who were selected. The research instrument is in the form of a test for holistic HOTS ability in solving environmental problems with 10 numbers that have been validated by material and construction experts. The holistic HOTS ability tests were given to respondents in online mode. The data in the form of a holistic HOTS ability scores in solving environmental problems were examined through descriptive quantitative analysis. The results showed that the score of the students' holistic HOTS ability in solving environmental problems obtained an average score of 25.11 (very low) for biology program, biology education study program of 30.21 (very low), and a combination of biology and biology education with 27.36 (very low), respectively. It can be concluded that the holistic ability of HOTS in solving environmental problems among undergraduate students of biology and biology education programs can be categorized into the very low and it needs efforts to make improvements.

**Keywords:** Holistic HOTS, environmental problems solving, biology and biology education programs.



# ALTERNATIVE DIGITAL LEARNING DURING THE COVID-19 PANDEMIC - AUGMENTED REALITY IMPLEMENTATION

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## Abstract

The Ministry of Education, Culture, Research, and Higher Education has more attention to online learning as a result of the Covid-19 Pandemic. The government through the policy direction in 2021 gives priority to handling the Covid-19 pandemic, one of which is the development of models and teaching materials that can be implemented online without compromising the quality of learning, including the use of virtual media and augmented reality. The objectives of this study are 1) to develop online-based teaching materials through virtual/augmented reality; and 2) produce appropriate products in the form of online-based teaching materials in Vocational High Schools. This study is a development research. This product is developed and implemented in the area of expertise of the Vocational High School of Technology and Engineering. The approach used in this study is the System Development Life Cycle (SDLC) which is described by the V-model, starting with the requirements analysis stage, requirements specification, design specification, and program specification. The product test used includes aspects of functional suitability, performance efficiency, compatibility, and usability. The results of this study include: 1) online-based teaching materials developed through virtual and augmented reality in vocational learning have been successfully implemented in building construction subjects in the sub-competency of wooden roof construction; 2) the appropriate product produced in the form of teaching materials has been used in learning in SMK and Higher Education with the results of the readiness test on the functional suitability aspect of 4.67 (high), performance efficiency of 4.745 (high), compatibility of 4.608 (high), and usability of 4.602 (high). Although the average is obtained in the high category, further studies are still needed (second and third years) in order to develop a comprehensive learning model and product dissemination.

**Keywords:** augmented reality, wooden roof construction, vocational learning





# DEVELOPMENT, IMPLEMENTATION, AND MEASUREMENT OF LEARNING MANAGEMENT SYSTEM (LMS) IN INDONESIAN Universities DURING COVID-19: LARGE SCALE SURVEY WITH MULTI GROUP ANALYSIS APPROACH TO STRUCTURAL EQUATION MODELING

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## Abstract

With more than three billion people in quarantine, the status of digital spaces is shifting from convenience to necessity, as they become not only the main way to access information and services, but also the only remaining vector for economic, educational and recreational activities. and social interaction. Researchers analyzed the phenomena that occurred during Covid-19 which showed a tendency to use the LMS system that was not yet effective in education around the world, especially in developing countries. The integration of technology as an important factor for the development of teaching and learning that triggers responsible governments to introduce policies and initiatives as well as investments to build and maintain tools and infrastructure that supports the use of LMS in distance learning, especially during the Covid-19 pandemic. Not many studies have been reported in the context of developing countries. Moreover, very few people discuss the use of LMS in higher education. The research was carried out at 12 accredited B universities in 6 islands (Sumatra, Java, Bali, Kalimantan, Sulawesi, Papua). This research will be carried out within a period of 3 years in the first year of research. The population of this research is lecturers and students throughout Indonesia who have implemented distance learning using LMS. Simple Random Sampling and the application of G\* Power are the sampling methods of this research, through the G\* power method the use of minimal sampling for PLS-SEM which involves 9 predictor variables is 278 respondents (Mukminin et al., 2020). However, we plan to distribute printed research questionnaires to 400 students at each university with a total of 4800 questionnaires distributed. The results show that: 1) during the Covid-2019 pandemic, the current study seeks to create and validate a model for the success of the D&M Model in measuring LMS use, 2) the final scale consists of 19 items divided into six constructs (system quality, information quality), service quality, system usage, user satisfaction, and LMS benefits), 3) The measured scale has adequate psychometric characteristics and can be used in further research. The reliability and validity of the scale were only tested.

**Keywords:** Learning Management System, Covid-19: Survey, Multi Group Analysis, SEM.



# THE STUDY OF MULTICULTURAL EDUCATION AT UNIVERSITAS NEGERI YOGYAKARTA INDONESIA AND LR DAV COLEGE JAGROAN INDIA

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## Abstract

The multicultural education in the implementation of education, is in order to provide non-discriminatory education services. Education is for all, regardless of ethnicity, language, country of origin, ethnic origin, character, personality, and other personal characteristics. This study aims to find out: comparison of multicultural education implementation at Universitas Negeri Yogyakarta, Indonesia with LR DAV College Jagraon India, and supporting factors of multicultural education implementation at Yogyakarta State University, Indonesia with LR DAV College Jagraon India. The research method used a descriptive qualitative method with a comparative case study approach at UNY with LR DAV College Jagraon India. The data sources in this study were lecturers, campus leaders, and students. The technique of collecting data uses interviews, observation, and documentation. Data validity using informant feedback techniques and triangulation methods, data, and theory. Data analysis uses an interactive model to analyze qualitative and quantitative data through the steps of data collection, data reduction, data presentation, and verification or conclusion. The results showed that multicultural education is not a slogan or a course but a mission that is embedded in the everyday school life. Schools function as an arena where students could practice good virtues and go beyond their school life. Most important, the promotion of character education should not just a leap service but has an action plan for practice. Other words, education policy should take the lead to actualize moral education in the school system. Taken together, parents, teachers, and administrators as stakeholders, should join this camp to encourage students to manifest those good values in their lives. The outcome of character education has always been encouraging, solidly, and continually preparing the leaders of tomorrow.

Keywords: model, education, and multicultural



# ENHANCEMENT OF ANTIMICROORGANISM ACTIVITY AND DEGRADABILITY OF PICKLE SKIN BY MODIFICATION WITH NANOPARTICLE

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## Abstract

The objectives of this research were to characterize nanoparticles prepared with three methods, i.e. extraction, microwave, and ultrasound, and also to study the effect of nanoparticles in modification of pickle skin on hydrophobicity properties, mechanical properties, antimicrobial activity, and biodegradation of skin. A silver nanoparticle was prepared by using an extract of algae to change silver ion to nano. Extract solution of algae was produced by using water solvent and then the mixture of extract and nitrate silver solution was shaken for 24 hours in extraction method. The mixture was treated in microwave for 4 min at a power of 300 W to complete the formation of nano. In the ultrasound method, the mixture was ultrasound treatment for 30 min. Characterization was performed using a UV-VIS spectrophotometer and a particle size analyzer to analyze silver nanoparticles. Characterization of modified pickle skin was conducted by determining hydrophobicity, mechanical properties, antibacterial and antifungal activity against *Escherichia coli*, *Staphylococcus epidermidis*, and *Candida albicans*, and also biodegradability of a pickle. Based on the results of UV-VIS and PSA analysis, silver nanoparticles had been prepared successfully by supporting the microwave method, the extraction method, and the ultrasound method. There were significant differences in the hydrophobicity, mechanical properties, activities of anti-bacteria and anti-fungi, and also degradability of pickle skin.

**Keywords:** *Candida albicans*, *Escherichia coli*, nanoparticle, pickle skin, algae, and *Staphylococcus epidermidis*.



# MODEL PEMBELAJARAN ISSITech (INQUIRY BERBASIS SOCIO SCIENTIFIC ISSUES BERBANTUAN ICT) DAN PENGARUHNYA TERHADAP *SOFT SKILLS* DAN *SCIENTIFIC LITERACY* CALON GURU IPA

Development of ISSITech Learning Model and Its Effect on Soft Skills and Scientific Literacy of Pre-service Science Teachers

## Abstract

Capaian mata kuliah Ilmu Lingkungan selama ini belum mengacu pada berkembangnya kemampuan *scientific literacy*. Berdasarkan kurikulum KKNI, learning outcome mata kuliah ini mencakup empat aspek kompetensi yang harus dicapai, dimana *soft skills* dan *scientific literacy* mejadi bagian di dalamnya. Penelitian ini memberikan solusi melalui pengembangan model pembelajaran *Inquiry* berbasis *Socio Scientific Issues* berbantuan ICT (ISSITech) yang dapat mengembangkan kemampuan *soft skills* dan *scientific literacy*. Tujuan penelitian ini mengembangkan model pembelajaran ISSITech beserta perangkatnya yang valid dan layak digunakan. Metode penelitian menggunakan *Research and Development* dengan model Borg and Gall. The first year of this reserach melibatkan 150 calon guru IPA yang sedang mengambil mata kuliah Ilmu Lingkungan pada 3 perguruan tinggi. Hasil validasi ahli menunjukkan model pembelajaran ISSITech beserta perangkat pendukungnya (RPS, LKM dan bahan ajar) dianggap layak dan berkualitas untuk digunakan dalam penelitian. Validitas isi pada 33 butir soal *scientific literacy* yang diperoleh dari empat orang ahli (rater) menggunakan *Aiken's V*, menyimpulkan 33 soal *scientific literacy* dinyatakan valid. Reliabilitas soal *scientific literacy* diperoleh dengan menggunakan program QUEST, diperoleh nilai *reliabilitas* soal *scientific literacy* sebesar 0,96 dengan kategori sangat tinggi. Pengembangan ini menghasilkan main product model pembelajaran ISSITech layak dan berkualitas untuk meningkatkan *soft skills* dan *scientific literacy* calon guru IPA.

The achievements of the Environmental Science course have not yet referred to the development of scientific literacy skills. Referring to KKNI, the learning outcomes of this course cover four competency aspects that must be achieved, in which soft skills and scientific literacy are part of it. This research provides a solution through the development of an ICT-based Socio Scientific Issues based Inquiry learning model (ISSITech) that acquire soft skills and scientific literacy. The purpose of this study is to develop a valid and suitable ISSITech learning model and its tools. The research method used Research and Development with the Borg and Gall model. The first year of this research involved 150 science teacher candidates who are enrolled Environmental Science courses at 3 universities. The results of expert validation show that the ISSITech learning model and its supporting devices (lesson plan, worksheet and teaching materials) are considered appropriate and qualified to be used in research. The validity of the contents of 33 scientific literacy items obtained from four experts (rater) using Aiken's V, concluded that 33 scientific literacy questions were declared valid. The reliability of scientific literacy questions was obtained using the QUEST program, and the reliability value of scientific literacy questions was 0.96 with a very high category. This development resulted in a feasible and high quality ISSITech main product learning model to improve the soft skills and scientific literacy of pre-service science teacher.

Key word: soft skills, scientific literacy, pre-service science teacher, environmental education



# Inovasi Model Pembelajaran Kooperatif Dalam Pendidikan Jasmani Melalui Permainan Rugby Untuk Menanamkan Nilai Karakter Peserta Didik Sekolah Dasar

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## Abstrak

Penguatan pendidikan karakter (PPK) dalam beberapa tahun terakhir menjadi fokus dan program prioritas pemerintah Indonesia. Sudah banyak usaha yang dilakukan pemerintah bersama beberapa pihak terkait tidak terkecuali pendidikan. Akan tetapi data menunjukkan masih banyak terjadi penyimpangan sikap, tindak kriminal, kekerasan, kasus tindak pidana korupsi (TPK). Untuk mengembangkan karakter berarti kita harus lebih menekankan domain afektif. Pendidikan Jasmani selama ini lebih banyak pada domain prioritas psikomotorik dan kognitif sedang domain afektif sering diabaikan (hanya sebagai domain interaksi). Beberapa literatur menekankan pembelajaran kooperatif untuk digunakan pada sekolah dasar tetapi model direct teaching justru yang masih mendominasi. Rugby merupakan salah satu permainan invasi dan olahraga ini baru berkembang di Indonesia sehingga perlu di kenalkan kepada anak-anak sekolah dasar. Selain karena gerak dalam olahraga Rugby mencakup beberapa gerak dasar seperti berlari, melompat, mengangkat, mendorong, melempar, menangkap, menendang hal ini juga karena olahraga Rugby sangat menekankan nilai-nilai karakter *solidarity, passion, integrity, discipline, respect*. Karakter tersebut bisa dikembangkan sejak sekolah dasar (SD) untuk membantu program PPK melalui pembelajaran kooperatif dalam Penjas. Penelitian ini bertujuan untuk: (1) menghasilkan model pembelajaran kooperatif dalam Penjas melalui permainan Rugby untuk menanamkan nilai-nilai karakter peserta didik SD (2) mengimplementasikan model pembelajaran kooperatif dalam Penjas melalui permainan Rugby untuk menanamkan nilai-nilai karakter peserta didik SD, (3) mengetahui tingkat kelayakan dan keefektifan model pembelajaran kooperatif dalam Penjas melalui permainan Rugby untuk menanamkan nilai-nilai karakter peserta didik SD. Penelitian ini menggunakan metode penelitian pengembangan, desain penelitian menggunakan modifikasi model Borg and Gall menjadi 6 langkah yaitu studi pendahuluan, penyusunan desain model, validasi ahli, ujicoba lapangan, evaluasi produk, uji produk. Tahap penelitian ini dilakukan dua tahun. Tahun pertama ada tiga langkah, yaitu: langkah pertama, studi pendahuluan melalui survei, teknik pengumpulan data menggunakan kuisisioner dan analisis data menggunakan deskriptif kuantitatif. Langkah kedua, analisis dokumen model pembelajaran dengan menggunakan naratif review, data kuantitatif berupa dokumen model pembelajaran kooperatif untuk penanaman karakter. Langkah ketiga, melakukan evaluasi model melalui FGD untuk mencari validasi konten untuk model pembelajaran oleh 9 orang ahli dengan teknik Delphi, analisis data kualitatif dan formula Aikens.

Kata kunci: Rugby, Model Pembelajaran Kooperatif, peserta didik SD, Pendidikan jasmani



# INOVASI MODUL EDUCHE (Education Card Healthy) UNTUK MENGANALISIS AKTIVITAS FISIK OLAHRAGA DAN KEJADIAN OVERWEIGHT PADA REMAJA

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## Abstrak

Prevalensi *overweight* remaja semakin meningkat 11 tahun terakhir yaitu sebesar 11,3%. Prevalensi ini tergolong tinggi. Data World Health Organization (WHO) dan Kementerian Kesehatan Republik Indonesia (Kemenkes RI) menunjukkan risiko utama *overweight*, karena rendahnya aktivitas fisik sedentary dan pola makan yang tidak seimbang. Selama ini Kemenkes telah mengembangkan modul kesehatan bagi remaja, namun modul yang dikembangkan masih belum efektif menurunkan kejadian *overweight*. Perlu inovasi untuk mengatasi masalah tersebut. Inovasi modul *Education Card Healthy* (Eduche) salah satu upaya yang dikembangkan peneliti agar dapat meningkatkan aktivitas fisik dan perbaikan pola makan, harapannya dapat menurunkan kejadian *overweight* dikalangan remaja. Tujuan penelitian ini mengembangkan modul *eduche* yang layak dan valid untuk menganalisis aktivitas fisik dan pola makan remaja. Metode penelitian ini menggunakan model D4 (*Define, Desain, Development, Desimination*). Prosedur penelitian tahun pertama, tahap pertama adalah *Define* yaitu mendefinisikan konsep dan operasional. Tahun pertama, tahap pertama *Desain* konstruksi modul *Eduche*. Partisipan penelitian adalah dokumen, sembilan para ahli. Analisis data menggunakan formula Aiken dan kuantitatif deskriptif. Hasil penelitian tahap pertama uji kelayakan, dan validitas didapatkan sebesar 83,4% layak, dan valid (indeks validitas:0,920;  $p < 0,05$ ) untuk digunakan dalam penelitian, meskipun beberapa titik pada indikator bahasa yang perlu diperbaiki dengan pemilihan kalimat yang lugas agar maksud dan tujuan penelitian sampai kepada remaja dengan baik. Modul *eduche* layak dan valid digunakan untuk meningkatkan aktivitas fisik dan perbaikan pola makan pada remaja.

Kata kunci: modul *eduche*, uji kelayakan dan validitas, aktivitas fisik, pola makan, remaja,



# THE STUDY OF RESEARCH MANAGEMENT STANDARDS AT UNIVERSITAS NEGERI YOGYAKARTA AND UNIVERSITI UTARA MALAYSIA

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## Abstract

their obligations. Research activities are accommodated by a research institute which regulates the mechanism and design and implementation of research activities. To maintain the quality of the implementation of research activities, research institutions and universities have research management standards. The purpose of this research is to find out: 1) what are the standards of research management at Yogyakarta State University and at Universiti Utara Malaysia, 2) how is the realization of the achievement of research management standards at Yogyakarta State University and at Universiti Utara Malaysia, 3) what are the obstacles in implementation research management standards at Yogyakarta State University and at Universiti Utara Malaysia. This research uses quantitative and qualitative methods with a comparative study between the standards of research management at Yogyakarta State University and at Universiti Utara Malaysia. The focus of the study is regarding university policies regarding research management standards by referring to the Permendikbud on national higher education standards, and quality documents both at Yogyakarta State University and at Universiti Utara Malaysia. Data collection techniques using FGD techniques, questionnaires, documents, observation, and online interviews. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated using the informant review model and data triangulation. Quantitative data analysis using descriptive analysis techniques and qualitative data with an interactive analysis model. The research management standards between Yogyakarta State University and Universiti Utara Malaysia have almost the same standards covering planning, organizing, implementing, and monitoring and evaluation. Meanwhile, the realization of research management has the same thing as university research institutes under the direct supervision of the Chancellor. Research management is carried out by the head of the institution who is responsible to the chancellor.

Keywords: standards, research management, study.



# AD ANALYSIS ON CURRICULUM AS A PRAXIST OF JUNIOR HIGH SCHOOL PHYSICAL EDUCATION, SPORT, AND HEALTH IN SLEMAN REGENCY

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## Abstract

One school of thought in curriculum theory views the curriculum as a praxis. This study aims to analyze the curriculum as a praxis in Junior High School Physical education, Sports, and Health (Penjasorkes SMP) in Sleman Regency.

This research is a research and development of the second phase of the 4D (Define, Design, Develop, and Dessiminate) model approach. The first stage was produced an analytical instrument of curriculum as a praxis for junior high school physical education, health, and sports that is valid and reliable. The second stage is to carry out analyzing a curriculum as a praxis in Junior High School Physical Education, Health and Sports in Sleman Regency. Data were collected using an analytical instrument of curriculum as a praxis that has been developed. The research subjects were supervisors, principals, and physical education, health and sports teachers in junior high schools in Sleman Regency. The data that was collected was then analyzed using a qualitative descriptive method.

The research results shows that supervisors, principals, and especially physical education teachers understand that the curriculum as a praxis has three components, namely the philosophical foundation, discourse development, and implementation of the Junior High Scholl Physical Education Helath, and sports in Sleman District Junior High Schools.

Keywords: Curriculum as a praxis, Junior high school, physical education, analytical instrument





# Internalization of Islamic Leadership Values at Madrasah Mu'allimin Yogyakarta

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## Abstract

This research focuses on examining the process of internalizing the Islamic leadership values in the Islamic Education Institute of Madrasah Mu'allimmin Yogyakarta. Leadership can be defined as the ability to influence others to achieve common goals. Institutions that have a strategic position to develop leadership for the younger generation are schools. The informants of this research were teachers and students. The data were analyzed utilizing interactive analysis, consisting of four stages: data collection, data reduction, data display, and drawing conclusion/verification. The results of the research show that the internalized Islamic leadership values aim to develop graduates to become prospective religious scholar cadres, leaders, and educators that brings Muhammadiyah movement missions with the following characters: awareness of the daily behavioral values, social life spirit, maturity and autonomy, critical intellectual reasoning, holding Muhammadiyah principles, and pioneering in society.

**Keywords:** Internalization, leadership values, students.



# School Counselor Belief Online Guidance And Counseling Service

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## ABSTRACT

This study aims to determine the school counsellor belief in the process of online guidance and counselling services. Technological developments and the COVID-19 pandemic have brought about rapid changes in education, including the process of guidance and counselling services. Technology has become an inseparable need in everyday life. In guidance and counselling services, technology becomes a medium that becomes a liaison between students, teachers, and parents to continue carrying out the task of helping students. The research was conducted using a survey method, and the sampling technique used was accident sampling, which used the available subjects to be the sample. The results obtained that the platform that is comfortable to use is the WhatsApp group, the most convenient media to use is PowerPoint, the most common service delivery technique is lectures and material delivery, the most common obstacles are related to poor internet connections, and also students find it challenging to understand the service material provided. Apart from that, guidance and counselling teachers also assess the most effective delivery model using blended learning. This study also shows that the most widely used devices are cellphones, followed by laptops and computers, while for the internet network, the most used is internet quota.

**Keywords:** school counsellor, online, guidance and counselling,



# Model for Characters Strengthening Based on 5s to Support The Halal Industry in UNY and IIUM Students

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## Abstract

This study aims to develop a model for strengthening characters based on 5s to support halal industry. This research uses the research and development model uses the Borg & Gall development model. Data collection techniques with observations and interviews at UNY, IIUM and halal industry. This research has only gone through three stages of development, namely research and information collecting, planning, and developing preliminary from the product. The result of this research is the 5S character strengthening model (Sort, Set in Order, Shine, Standardize, and Sustain) mapped and described. In this model, there are components, steps, and tools used in implementing 5S. The development of this 5S model can equip students with soft skills so that they are ready to enter the world of halal industry work.



# THE POLITENESS OF IMPERATIVE SPEECH ACT IN THE INTEGRATED THEMATIC ELEMENTARY SCHOOL BOOK

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## Abstract

This study aimed to describe the politeness of imperative speech acts in an integrated thematic book for elementary school. It is a content analysis with a descriptive qualitative study. The main data of this study are utterances in imperative sentences written in the discourse of the integrated thematic book, curriculum 2013, for the fourth-grade elementary school of Indonesia. The data were collected through listening and note-taking technique. To analyze the data, it employed the analysis technique of *agih* and pragmatic equivalent. The result of this research was that the construction developed in the integrated thematic book complied with the politeness principle in tact maxim, generosity maxim, and agreement maxim. The speech act strategies used were direct literal speech acts and literal indirect speech acts.

**Keywords:** Politeness; Imperative; Speech act; School book



# STEM Implementation Issues in Indonesia: The Problems and Its Implications

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## ABSTRACT

The last few years STEM education received more attention in the world, including in Indonesia. There are many teachers who have participated in socialization and applied STEM in their schools. Therefore, this study aims to describe the various obstacles faced by teachers in implementing STEM learning. This research is qualitative research using a phenomenological approach. Data is collected by in-depth interviews with 17 teachers who have information and knowledge related to STEM as an integrative learning framework and have participated in socialization, workshops, or seminars. The stages of data analysis are doing data reduction, determining themes, making links between themes, and concluding findings. The conclusions of the study are three broad categories of things that challenge schools in implementing STEM learning in Indonesia, namely policy support and limited learning facilities, complex learning management, and the ability of teachers to manage students that are very diverse.

Keywords: STEM Education, Indonesian Curriculum, Issues, Schools, Implementation.



## **EDUCATIONAL POLICIES TO REDUCE BULLYING IN SCHOOLS: COMPARATIVE STUDIES IN INDONESIA AND MALAYSIA**

**Ariefa Efianingrum, Norwaliza Abdul Wahab, Siti Irene Astuti Dwiningrum, Riana Nurhayati**

### **Abstract**

Bullying among students at school remains one of the significant problems and social phenomenon in many countries that is difficult to eradicate. Therefore, this study aims to: a) describe the phenomenon of bullying among high school students in Indonesia and Malaysia and b) determine the educational policies to reduce school bullying in Indonesia and Malaysia. This research was conducted with a mixed-method to address the problem comprehensively. Furthermore, quantitative data were used to describe bullying phenomenon in school with a survey used as an instrument to determine its causes. Therefore, based on the equation, the minimum sample size (n) was 228, while the respondents were 1452 students of high school in Indonesia. In the context of Malaysia, the sampling technique was also based on the consideration of the research representation and goals. The election of the country was done randomly which represents the four zones: the north, south, middle, and east zone. The respondents of this research were the senior high school students who generally consist of ethnic Malay, Chinese, and Indian. Meanwhile, the qualitative data were used to investigate the social activities that induce bullying and identify educational policies to reduce bullying through indepth interview and documentation. This study supports the argument on the difficulty in eradicating bullying behavior in schools. Therefore, strong educational policies, such as anti-bully campaigns need to be inisiated and implemented in Indonesia and Malaysia.

Keywords: school bullying, educational policies, comparative study



**NO TITLE**

**NO NAME**

**Abstract**

This study aims to identify the needs of parents in facing childcare constraints during the pandemic. The method used is a survey using an online questionnaire. The number of respondents involved was 78 parents. The questionnaire was validated by 2 experts. The obstacles faced by parents are obstacles in accompanying children to learn, mastery of learning materials, mastery of IT, and networks, anxiety about children's education. On the other hand, teachers adapt to dealing with parents because it is not only children who have to be educated but also parents.



# UTILISING LEISURE TIME AMONG INDONESIAN YOUTH ACROSS THE NATION

Farida Hanum, Ariefa Efianingrum, Shely Cathrin, Maryani

## ABSTRACT

This study aims to map data on the use of Indonesian youth's leisure time in various regions of the country. The youth referred to in this study are students from various universities in the country. From the results of this study, it is obtained an overview of how students as youths use their free time in terms of three criteria, namely gender, regional differences (West, Central, East), and other activities.

This research is a quantitative research with a survey approach. The research sample was determined using the expert formula of Krejcie and Morgan, so that a total sample of 384 students was obtained, but to increase representation, the sample was increased to 1224 students from universities in the western, central, and eastern regions of Indonesia.

Data was collected using a questionnaire distributed through Google Forms to various universities through the network of UNY partners and lecturer partners of research members. Quantitative data were analyzed with descriptive statistics, namely the mean, then analyzed using ANOVA statistics, in order to obtain an overview of the youth's use of leisure time and the dominance of student involvement in various aspects of leisure activities.

The results showed that in terms of regional differences, youth in the West Indonesia region were more involved in leisure activities in the form of educational activities, sports and recreational activities, and community activities. Meanwhile, youth in Eastern Indonesia are more involved in leisure activities in the form of religious activities, family activities, and entrepreneurial activities. Meanwhile, in terms of gender, male youth were found to be more likely to have a high intensity in physical (sports), social (community) and creativity (entrepreneurship) activities, while female youth were more likely to have a higher intensity in non-formal activities. physical (education and religious) and the closest object in life (family). Finally, the use of youth leisure time in Indonesia based on other activities (working vs. not working) shows that youth who work have a higher intensity of activity, both physical (sports, community) and non-physical (education, religion, entrepreneurship), while youth Those who are not working are known to be more involved in family activities than young people who are working.

The results of the study imply that an increase in leisure activities, especially youth participation in the Eastern region in educational activities, is necessary for community activities. Furthermore, universities need to develop facilities and infrastructure that can support youth activities, especially youth in Eastern Indonesia in educational activities outside of class hours as well as facilities and infrastructure to support youth involvement in community activities.

Keywords: Utilization of Leisure Time; Youth Leisure Time; Indonesian youth





# IMPROVING COMMUNICATION SKILLS THROUGH PROBLEM PROJECT BASED AND ONLINE LEARNING INTEGRATED IN MPP COURSES

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## ABSTRACT

This research is motivated by the problem of student learning interaction and communication in online learning which is low with inconsistent learning achievement between personal and classical tests. The research objective is to improve students' communication skills through integrated online project-based learning. The research subjects are students who take the odd semester Educational Research Methodology (MPP) course in 2021-2022 in the Informatics Engineering Education study program, Faculty of Engineering, Yogyakarta State University. The results showed that the discussion of problem solving was felt by most of the students to be very helpful in mastering the material and completing projects. The improvement of communication skills in the first cycle was 23.53% in the less category and 76.47% good to 100% good and very good in cycle 2. The largest increase in mastery of the material, but still the lowest communication indicator achievement score.

Keywords: Communication Skills, Problem Based Learning, Online Learning



# The Effects of 6-Weeks FIVE Program on Agility and Sprint Performance Among Female Futsal Players

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## Abstract

This study investigates the effects of 6 weeks implementation of FIVE exercise, which is used as an agility and sprint improvement program for young female futsal players. This two groups experimental study involving 61 Indonesian female futsal players as subjects (ages  $17.00 \pm 0.98$  years, weight  $50.52 \pm 7.73$  kg, height  $1.57 \pm 0.05$  meters, BMI  $20.61 \pm 3.18$  kg/m<sup>2</sup>).

The players were randomized into two groups; 27 were experimental (EXP) group, and 34 players were in the control (CON) group. The subjects in EXP group underwent FIVE program exercises in addition of their regular training while the CON group underwent their regular training. Both of the groups performed the intervention three times per week for six weeks. Measurements of Illinois agility test and 10-meter sprint test were performed before and after the intervention. Changes in performance results (pre and post-test) in each group were analyzed using a paired t-test and Wilcoxon test. Changes in performance between groups were analyzed using a non-paired t-test and Mann-Whitney test. Statistical significance was set to  $p \leq 0.05$ .

The results showed that the agility ( $p = 0.01$ ) and 10-meter sprint test ( $p = 0.04$ ) increased significantly in the FIVE group, while only sprint improvement was in the CON group ( $p = 0.00$ ). There were no significant performance changes in agility ( $p = 0.30$ ) and sprint ( $p = 0.10$ ) between EXP and CON group. These results indicated that FIVE program has a beneficial effect on improving agility and sprint performance among female futsal players.

Keyword : futsal, performance, speed, agility, FIVE



# Hydrogen Gas Production: H<sub>2</sub>O Splitting by Stainless Steel/Fe-Co-Ni in Base Solutions and Green Betel (Piper betle) Leaf Extract Media

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## Abstract

The effect of green betel (Piper betle) leaf extract media and temperature on hydrogen gas production by water electrolysis with stainless steel/Fe-Co-Ni electrode, and the optimum condition had been studied.

The variations of temperature at 25<sup>o</sup> C, 35<sup>o</sup> C, 45<sup>o</sup> C, and variations of media concentration (green betel/ Piper betle leaf extract) of 0; 0.004; 0.008; 0.01; 0.02; 0.03; 0.04; 0.05; 0.1; 0.15; and 0.2 g/mL. Hydrogen gas production was carried out by electrolysis of water by cyclic voltammetry with a scan rate of 50 mV/s by eDAQ Echem voltameter. The electrolysis process used NaHCO<sub>3</sub> of 5 gram per 1 liter of aquabides. Stainless steel/Fe-Co-Ni electrode was characterized by SEM-EDX and XRD.

The results showed that the use of stainless steel/Fe-Co-Ni electrodes in green betel (Piper betle) leaf extract media gave better results than without it. The optimum condition of hydrogen gas production is at a temperature of 45 °C with addition of 0.15 g/mL green betel (Piper betle) leaf extract.

Keyword: stainless steel/Fe-Co-Ni electrode, electrolysis, green betel (Piper betle) leaf, hydrogen gas, cyclic voltammetry



## **STUDENTS' SOCIAL RESPONSIBILITY CONSTRUCTION MODEL AT SCHOOL/MADRASA IN DISASTER-PRONE AREAS**

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### **ABSTRACT**

The systematic construction of social responsibility is essential by students at schools/madrasas in disaster-prone areas. With good social responsibility, students will have preparedness in dealing with natural disasters. This study aims to describe the social responsibility profile of students in schools/madrasas in disaster-prone areas using qualitative methods. The research in disaster prone areas category III in Magelang Regency, Central Java Province. Data collection techniques with interviews, questionnaires, observation and documentation. The research subjects were 44 teachers from 11 schools/madrasas and the respondents were 240 students who were determined by purposive random sampling technique. The data analysis technique begins with categorizing, interpreting the data and making conclusions. The research results obtained: The results obtained are: 1) The causative factors of student social responsibility construction are needed to understand students' social role; having adaptive behavior in their community; having social integrity; responsive to of social changes dynamics that occur; contributing to disaster risk reduction; 2) Schools/madrasas efforts in social responsibility construction through intra-curricular and co-curricular, extracurricular and school/madrasah culture activities; 3) Mapping students social responsibility with the lowest behavior on developing competence dimension and the highest behavior on contributing to community dimension.

Keywords: social responsibility, students, disaster-prone areas



# Learning Experiences during COVID-19 Pandemic: Issues on Technological, Pedagogical, and Content Knowledge (TPACK), and Career Adapt-Abilities among Teachers in Indonesia and Malaysia

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## Abstract

The shift from face-to-face learning to online learning due to the COVID-19 pandemic was not easy for teachers because teachers have not been prepared to do so. The adaptability of teachers becomes an important factor in dealing with it. The adaptability in conducting online learning was supported by the ability to integrate materials, teaching, and technology or Technological Pedagogical and Content Knowledge (TPACK). The purpose of this study is to test the effects of Technological Pedagogical and Content Knowledge (TPACK) to career adapt-abilities. A sample of 457 teachers in junior and senior high school teachers in Indonesia and Malaysia completed the Technological Pedagogical and Content Knowledge Scale and the Career Adapt-Abilities Scale. The result for the analysis of linear regression was significant which confirmed that TPACK can predict career adapt-abilities in Indonesian and Malaysian teachers. This research also found that there was no difference of TPACK and career adapt-abilities between Indonesian and Malaysian teachers.

Keywords: TPACK, career adapt-abilities, teacher, regression



# Design and analysis of 300w Electric Motor on PV Waterpump

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## ABSTRACT

The need for a water pump to drain water with low power is something that is urgently needed. The issue of renewable energy is an important issue in the energy sources used to operate water pumps. The greater the energy required by the water pump motor, of course, a serious problem. So that the design of a water pump motor with low power with high efficiency needs to be analyzed.

The analysis carried out on the water pump includes the analysis of the finite element method (FEM), power, torque, speed, to efficiency. Where the material used in the design of the motor adapts to the needs that exist in the Indonesian market. These materials include magnets, stators, rotors, shafts, and others. The type of motor developed is an interior permanent magnet (IPM). Where, this type of motor has peak power at high speeds.

The result is an analysis of power, torque, and speed that can meet the needs of a water pump in distributing water. Motor output power is 300W, torque is 1.56 N.m. at 3000 rpm. Motor efficiency reaches 92%. Based on the design made, there needs to be an actual manufacturing and testing process to get real test results.



# VIRTUAL TOUR PROTOTYPE AS TOURISM INFORMATION MEDIA FROM UNIVERSITAS NEGERI YOGYAKARTA FOR INDONESIA

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## Abstract

The current rapid development of technology has encouraged many innovations in the field of technology. One of the quickly developing technological innovations is a virtual tour that is widely used in education. This research aims to create a virtual tour for tourism information media from Universitas Negeri Yogyakarta (UNY) for Indonesia. Media development is carried out utilizing research and development (R&D) methods employing the ADDIE model. The research results produce an innovative product, namely tourist information media prototype in the form of a virtual tour that the public can directly access to increase campus brand awareness in building an image and attracting new students. The prototypes development process collaborates with UNY partners to obtain operational and media development supports.

Keywords: virtual tour, information media, educational tourism



# THE ROLE OF FARMERS INSTITUTIONS IN ADAPTATION OF TOBACCO AGRICULTURAL ACTIVITIES ON MARGINAL LAND IN SELOPAMIORO VILLAGE, IMOIRI SUB-DISTRICT, BANTUL DISTRICT

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## ABSTRACT

Selopamioro Village, Imogiri Sub-District, Bantul District has a undulating to hilly topography with a slope of more than 30% so that it supports the existence of quite extensive marginal land in the area. This marginal land has now been developed as agricultural land with tobacco as the main commodity. The purpose of this study was to determine: (1) the role of farmer institutions (farmer groups and field extension officers), and (2) the role of farmer institutions in adapting tobacco farming activities on marginal land in Selopamioro Village, Imogiri Sub-District.

This study uses a quantitative descriptive approach. The research population is tobacco farmers in Selopamioro Village, Imogiri Sub-District. The research sample was determined by a quota of 50 people. Research data were collected through observation, interviews, and documentation. The data that has been collected is then processed and analyzed descriptively.

The results showed that: (1) the role of farmer groups was dominated as a medium of learning (74%), dominated as a less of cooperation (84%), dominated as a medium of production unit (76%), and dominated as a medium of business unit (92%). The role of field extension workers is dominated well in group counseling (70%), well dominated in supervision on farmer's land (64%), well dominated in individual counseling (76%), medium dominated as an innovator (30%), and dominated by well as facilitators (80%), and (2) the role of farmer institutions in adapting tobacco farming activities on marginal land, including: (a) nursery adaptation, (b) land management adaptation, (c) irrigation adaptation, and (d) fertilization and eradication adaptation pest.

Keywords: institutional, farmer, adaptation, marginal land, tobacco





# Assessing the Perceived Prevalence of Research Fraud among Faculty at Research-Intensive Universities in Yogyakarta/Indonesia Using Pentagon Theory

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## ABSTRACT

Academic fraud can potentially damage ethics, morals, and academic culture in Indonesia, one of the academic fraud in research fraud. This study investigates the relationship between the fraud pentagon and fraud research; furthermore, we examine the structure of each of the fraud pentagons and fraud research to examine the most robust relationship between variables. The study researched 135 academicians spread throughout Indonesia using surveys distributed online. The data analysis method uses canonical correlation. The results showed that there was a significant characteristic relationship between the fraud pentagon and fraud research. The most substantial relationship between the fraud pentagon and fraud research is in pressure,

Keywords: fraud pentagon, research fraud, canonical correlation



# INOVASI PROGRAM LATIHAN *REACTIVE AGILITY* KINERJA TENIS

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## Abstract

Tujuan penelitian ini untuk mengkaji Pelatihan Interval Intensitas Tinggi (*HIIT*) untuk Reaktif Agility Tenis dengan pendekatan literature review dan mengembangkan Pelatihan Interval Intensitas Tinggi (*HIIT*) untuk Reaktif Agility Tenis dengan validasi Aiken. Metode penelitian ini terdiri dua tahap yaitu pada tahap pertama menggunakan metode *Literature review* dan tahap kedua *validasi Aiken*. Tahap pertama Partisipan penelitian ini menggunakan dokumen. Pengumpulan data melalui data base Pubmed, dan Google Scholar, menggunakan teknik PRISMA (*Preferre Reporting Items for Systematic Reviews and Meta Analysis*) untuk mendapatkan artikel yang diinginkan untuk diteliti. Menentukan artikel yang akan diteliti ada 4 langkah yaitu (1) identifikasi, (2) penyaringan (*Screening*), (3) kelayakan (*Eligibility*), dan (4) *included*. Analisis data menggunakan analisis tematik melalui tiga tahapan yaitu *Compare, Contrast, Criticize*. Tahap kedua validasi model Pelatihan Interval Intensitas Tinggi (*HIIT*) untuk Reaktif Agility Tenis. Partisipan penelitian ini menggunakan delapan ahli. Analisis data menggunakan formula Aiken. Hasil penelitian tahap pertama dengan mengkaji hasil penelitian terdahulu tentang HIIT untuk reaktif agility tenis ditemukan kesamaannya yaitu pada umumnya menggunakan intensitas tinggi, jumlah tipe minimal delapan, frekuensi latihan minimal 3 kali perminggu, sedangkan pada umumnya perbedaan interval latihan, tipe latihan HIIT penelitian terdahulu untuk meningkatkan reaktif Agility Tenis. Selain itu jarang sekali penelitian HIIT untuk reaktif agility tenis. Oleh karena perlu dikembangkan HIIT untuk reaktif agility tenis. Hasil tahap kedua penelitian ini telah diketemukan Validitas nilai Aiken tinggi dalam pengembangan HITT untuk reaktif agility tenis.

Keywords: HITT, reactive agility, tenis



# 21<sup>st</sup> Century Skills Training According to the Experiences of the Manufacturing Industry 4.0 Article

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## ABSTRACT

The high number of unemployed both in underdeveloped, developing, and developed countries in the 21st century indicates that the unemployment problem cannot be solved only with an economic approach but must also be balanced with increasing competence according to industry needs. Competencies that must be improved are also not limited to technical competencies, but also competencies needed in the 21st century which are commonly referred to as 4Cs which include collaboration, critical thinking, communication, and creativity. This study aims to explore the form of training and habituation of 21st century skills carried out by the manufacturing industry 4.0 for its workforce. This study used a qualitative approach. The validity of the data was guaranteed by triangulation methods, namely interviews, documentation and observation. The subjects of this research were human resource and development staff from several manufacturing industries in Indonesia. The results showed that the 4C habituation was carried out in stages, starting with discussions carried out to maximize critical thinking skills and creativity to find solutions to problems together. The ability to communicate ideas and ideas is needed in the discussion process. In addition, workers must communicate any problems that occur to their superiors, they must not solve them themselves. Workers must report, discuss, coach and counsel to superiors. Solving problems that arise are carried out directly in the field based on the principles of real place, real object, and real facts. Production control or checking the progress of work is carried out by superiors by asking problems and finding solutions together so that the company's targets are achieved. Superiors also apply good and personal communication to subordinates in order to create a comfortable and caring atmosphere.

Keywords:

Keywords: 21<sup>st</sup> Century Skill, Unemployment, Vocational, Industry



# Developing of Augmented Reality Integrated Practicum Module to Improve Students' Motivation and Science Process Skills

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## ABSTRACT

Long with the industrial revolution 4.0 and the 21st century education era, educators need to emphasize that what is more important is that learning activities do not lie in mastering computer technology but in educational practice. Therefore, both lecturers, students and the environment build a culture that is able to integrate technology, pedagogy and also mastery of material or commonly known as (TPACK). Educational practices developed by integration or by the use of computer technology used by educators must be in accordance with the material and objectives to be achieved such as motivation and science process skills. An important part of using technology in learning Physics is how students understand physics with the help of existing technology rather than just focusing on using technology mastery techniques. One way to achieve learning objectives that are in accordance with 21st century learning is laboratory-based learning. To strengthen laboratory-based learning, an augmented reality (AR) integrated practicum module will be developed.

This research is a development research that aims to develop an integrated augmented reality practicum module. Research and development is carried out using the ADDIE model. The activity plan in the first year will produce an output in the form of a practicum module. The activity plan for the second year is the integration of the AR-integrated module into the mobile lab-based learning model, as well as its implementation in learning activities. The results of the implementation of the module that will be developed aim to improve physics learning outcomes such as better motivation and science process skills to learn physics.

This research is said to be successful if it can produce an augmented reality-based practicum/laboratory activity module. The output of this research is articles that will be published in the International Journal of Innovation, Creativity and Change (SJCR 2020 Q2, 0.21) and the Cypriot Journal of Educational Sciences (CJES) (SJCR 2021 Q3, 0.22). The research results will also be included in the 8th International Conference on Research Implementation and Education of Mathematics and Science (FMIPA UNY) international seminar with Scopus indexed proceedings. Another targeted result of this research is the copyright for ISBN modules and books by Agree Media Publishing which were developed according to TKT level 2 in the first year and TKT level 3 in the second year.

Keywords: Module; Laboratory; Augmented Reality



# STUDENTS' COMPUTATIONAL THINKING SKILLS IN SOLVING PROBLEMS IN NUMBER PATTERNS

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## Abstract

Computational thinking skills are essential 21st-century skills that enable thinking differently, solving real-world problems, and analyzing everyday problems from different perspectives. This skill is essential to be taught to students. The purpose of this study was to describe students' computational thinking skills in solving number pattern problems. The subjects of this study were 49 students who had studied number pattern material from SMP Muhammadiyah 9 Yogyakarta, SMP N 1 Pleret and SMP MBS Prambanan. Data were collected through tests which were then analyzed based on indicators of computational thinking ability, namely problem decomposition, pattern recognition, algorithmic thinking, abstraction, and generalization. The results showed that students' computational thinking skills in solving number pattern problems were categorized into three groups. First, the upper group who could fulfill all the indicators of computational thinking correctly were three students. Second, the middle group can fulfill 2 or 3 indicators correctly. There were 11 students in the middle group. Third, the lower group that only fulfilled one indicator correctly or did not meet the indicator at all were 33 students.

Keywords: 21st-century skills, computational thinking, number patterns



# INNOVATION SOFTWARE TALENT IDENTIFICATION ARCHERY SPORT IN YOGYAKARTA SPECIAL REGION

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## Abstract

Industrial Prototype Research with the theme of the flagship center of science and technology aims to produce product innovations in the form of *talent identification* prototype *software* in archery sports, to facilitate the process of networking children's talents that have potential in archery sports in DIY.

This research is development research. In this study, researchers made modifications through the simplification process. Simplification of the model from four stages to three stages, namely *defining*, design, and development (develop). This study sample was sons and daughters aged 6-11 years who were in the Special Region of Yogyakarta as many as 60 children.

This research instrument uses questionnaires and data analysis techniques conducted in this study is a quantitative analysis technique that is an assessment using numbers. The results of this study are expected to produce an instrument to find out the potential of children in archery sports that can later be built into professional archery athletes.

This research is (1) a product biomotor data analysis system to identify, potential and talent archery sports in children (2) the level of eligibility of this product is known through material validation assessments get the average results of assessment material aspects with the category of very suitable / very worthy, as well as the results of mediaspec assessment with very appropriate / very decent category. Thus, it can be concluded that this product is suitable/usable, and (3) based on effectiveness tests shows that the product is effectively used in identifying, distinguishing the potential and sporting talents of children aged 6-11 years.

Keywords: Inovasi, Software, Talent Identification, Archery



# Strengthening M(athematics) in the Implementation of STEM Education in Indonesia

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## Abstract

Issues of global and local importance such as climate change, health (covid-19), tolerance, meeting the need for food and shelter, and development of artificial intelligence technology require critical perspectives across a wide range of disciplines including science, technology, engineering, and mathematics (STEM). One of the problems in implementing STEM is the "loss" of mathematics in the STEM learning. Mathematics teachers should make mathematics transparent and explicit in promoting STEM education. The focus of this research is how the teacher's efforts to design learning that strengthen M in/for STEM. The research method used is phenomenological research. Dialogue with 10 mathematics teachers who implement STEM is used as a method to examine how the implementation of STEM that can instill a strong understanding of mathematics. The results showed that the efforts made by mathematics teachers to strengthen mathematics in STEM education were 1) prioritizing mathematics content by pushing other disciplines into the background, 2) using an embedded approach in implementing STEM education with the aim of understanding mathematical concepts, 3) and using project or problem in STEM education more load mathematical concepts.



# ANALISIS ENERGI CELAH PITA DAN STRUKTUR ELEKTRONIK PEROVSKIT LAYER $\text{NaLnTiO}_4$ ( $\text{Ln} = \text{Y, La, Nd}$ ) DENGAN METODE PENDEKATAN DENSITY FUNCTIONAL THEORY SEBAGAI KANDIDAT MATERIAL SEL SURYA DAN ANTI-BAKTERI

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## ABSTRAK

Pemanfaatan energi matahari dalam pengembangan energi terbarukan dan antibakteri menghadapi beberapa tantangan yaitu untuk meningkatkan efisiensi dan mengurangi biaya produksi. Atas dasar hal tersebut, maka sangatlah penting pengembangan material yang berkaitan dengan pemanfaatan sinar matahari untuk diaplikasikan dalam sel surya dan antibakteri tersebut. Berdasarkan hal tersebut di atas, pada penelitian ini melakukan analisis pada material perovskite layer  $\text{NaLnTiO}_4$  dan turunannya  $\text{NaLnTiO}_4\text{-xNx}$  ( $\text{Ln} = \text{Eu, Y, La, Nd}$ ) yang dinyatakan dalam tujuan berikut: (1). mengetahui pengaruh jenis atom lantanida ( $\text{Ln}$ ), (2). mengetahui pengaruh penerapan berbagai metode perhitungan, dan mengetahui pengaruh pendadah (*doping*) atom nitrogen ( $\text{N}$ ) terhadap energi celah pita dan struktur elektronik atau *density of state* ( $\text{DOS}$ ) pada perovskite layer  $\text{NaLnTiO}_4$  dan turunannya  $\text{NaLnTiO}_4\text{-xNx}$  berbasis perhitungan awal melalui pendekatan *Density Functional Theory* ( $\text{DFT}$ ). Implementasi perhitungan energi celah pita dan struktur elektronik menggunakan kode CASTEP. Data yang diperoleh melalui pendekatan *density functional theory* ( $\text{DFT}$ ) dengan *local density approximation* ( $\text{LDA}$ ) dan *generalized gradient approximation* dari Perdew-Burke-Ernzerhof ( $\text{GGA+PBE}$ ) sebagai fungsi korelasi perubahan berupa plot grafik dari struktur pita  $\text{NaLnTiO}_4$  dan turunannya  $\text{NaLnTiO}_4\text{-xNx}$ . Grafik tersebut diolah lebih lanjut untuk memperoleh informasi tentang besarnya energi celah pita ( $E_g$ ) dan *density of states* ( $\text{DOS}$ ) dari material tersebut. Hasil perhitungan energi celah pita  $\text{NaYTiO}_4$  dan  $\text{NaY}_{1-x}\text{La}_x\text{TiO}_4$  ( $x = 0,25, 0,50, \text{ dan } 0,75$ ) dengan variasi konsentrasi Lanthanum dan  $\text{LDA}$  sebagai fungsi korelasi perubahan diperoleh masing-masing sebesar 3,447 eV, 3,384 eV, 3,356 eV, dan 3,560 eV. Perhitungan dengan  $\text{GGA+PBE}$  sebagai fungsi korelasi perubahan masing-masing menghasilkan energi celah pita sebesar 3,250 eV, 3,039 eV, 2,963 eV, dan 2,930 eV. Hasil perhitungan karakter  $\text{DOS}$  untuk semua sampel menunjukkan pita valensi didominasi oleh orbital atom  $\text{O-}2p$  dan pita konduksi didominasi oleh orbital atom  $\text{Ti-}3d$ . Susbtitusi atom  $\text{La}$  pada atom  $\text{Y site}$  tidak dapat menghasilkan pita antara (*intermediate band*) melainkan hanya memperlebar atau mempersempit celah pita pada  $\text{NaY}_{1-x}\text{La}_x\text{TiO}_4$ . Hasil penelitian ini menunjukkan bahwa  $\text{NaLaTiO}_4$  beserta turunannya memiliki jenis celah pita tidak langsung. Karakter  $\text{DOS}$  dalam penelitian ini meunjukkan peran utama orbital atom  $\text{O } 2p$  dan  $\text{Ti } 3d$ .  $\text{NaLaTiO}_4$  memiliki energi celah pita sebesar 3,742 eV ( $\text{LDA}$ ) dan 3,630 ( $\text{GGA+PBE}$ ). Pada turunan  $\text{NaLaTiO}_4$  diperoleh nilai energi celah pita dengan rentang 3,492 eV hingga 3,678 eV dengan  $\text{LDA}$  dan  $\text{GGA+PBE}$  sebagai fungsi korelasi perubahan. Metode perhitungan  $\text{LDA}$  memiliki hasil energi celah pita yang lebih besar dibandingkan dengan  $\text{GGA+PBE}$ .  $\text{NaLaTiO}_4$  dan turunannya dapat diaplikasikan sebagai pembangkit listrik, katalis, dan baterai, mengingat sifat yang dihasilkan.

Kata Kunci:  $\text{NaYTiO}_4$ ,  $\text{NaLaTiO}_4$  Perhitungan Prinsip Awal,  $\text{DFT}$ , Energi Celah Pita,  $\text{DOS}$





# Validity and Reliability of IoJEPD Model Instruments to Improve Elementary School Teacher Competence

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## ABSTRACT

This study aims to test the validity and reliability of the IoJEPD model instrument to improve the competence of elementary school teachers. This study uses content validity. Quantitative methods and professional experts are the considerations used in this research. The stage of proving the validity of this instrument is carried out by means of a validation process involving three experts in the fields of learning, evaluation, and experts in the field of instrument preparation. Validity is carried out in the form of a rating scale, which is shown at the level of agreement of the validator rating on the validation items and the Cronbach Alpha Coefficient to measure reliability. The results showed that: a) 15 items of interview guidelines were valid with a validity index range of 0.883; b) 17 items of valid teacher response questionnaire with a validity index range of 0.877; 50 valid pedagogical competency questionnaires with a validity index range of 0.865, and 40 valid professional competency questionnaires with a validity index range of 0.838. With Cronbach's Alpha coefficient, the reliability of the pedagogical competency test above is 0.901 and the professional competency test is 0.810. So it can be concluded that the scale is valid and very reliable to measure the professional and pedagogic competence of elementary school teachers.

Keywords: validity, reliability, IoJEPD Model, teacher competence



# Phytochemical Analysis Both Of Water And Ethanol Extract From Some Herbal Combinations, Nanoemulsion Formulation, And Antioxidant Effects

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## ABSTRACT

This study aims to analyze the phenolic content and antioxidant activity of both water and ethanol extracts of a combination of several herbs (*Phyllanthus urinaria*, *Andrographis paniculata*, *Curcuma longa*, *Zingiber officinale*, *Citrus limon*, and *Cymbopogon citratus*), as well as product development in the form of nanoemulsions. The research was conducted by making three combinations of herbal mixtures with various compositions (Formula A, B, and C). The combined herbal powder was then made in the form of water and ethanol extracts. The ethanol extract of each herbal combination was then made also in the form of a nanoemulsion by spontaneous emulsion. The results showed that the ethanol extract of each herbal combination contained higher phenolic compounds and antioxidant activity than the water extract. The nanoemulsion product of the combined herbs ethanol extract had a particle size of 21.1; 34.9 and 50.7 nm, and showed high antioxidant activity.

Key word: *Andrographis paniculata*, Antioxidant; *Citrus limon*; combination herbs; *Curcuma longa*; *Cymbopogon citratus*; *Phyllanthus urinaria*, *Zingiber officinale*



# CURCUMINOID NANOEMULSION FROM *Curcuma xanthorrhiza* EXTRACT AND ITS ACTIVITY AS ANTIOXIDANT, ANTIBACTERIAL, AND ANTIFUNGAL

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## ABSTRACT

Curcuminoids are the main compounds in *C. xanthorrhiza* rhizome extract which are beneficial for health. This study was aimed at examining curcuminoids nanoemulsions and their activity as antioxidant, antibacterial, and antifungal. The synthesis method of curcuminoid nanoemulsion was carried out by spontaneous emulsion method, which was made by mixing curcuminoid extract with oil and tween 80 as a surfactant in various compositions. Furthermore, phosphate buffer pH 7.0 was added dropwise while stirring and heated at 70°C. The curcuminoid nanoemulsion products were characterized and tested for their potential biological activity. The antioxidant test used DPPH (2,2-diphenyl-1-picrylhydrazyl) method. The antibacterial test used the diffusion method using *Escherichia coli* and *Staphylococcus epidermidis*. The antifungal test used *Candida albicans*. The curcuminoid nanoemulsion products obtained at various concentrations of curcuminoid extracts from 0.01 to 0.05% have an average particle size of 19.5 to 32.1 nm, polydispersity index < 0.3, and zeta potential of -4.5 to -9.2 mV. Curcuminoid nanoemulsion showed high antioxidant and antifungal activity, while antibacterial activity showed moderate activity. The conclusion is that curcuminoid nanoemulsion from *C. xanthorrhiza* extract can be used effectively in the production of antioxidant and antimicrobial potential for commercial applications.

Keywords: antimicrobial, antifungal, antioxidant, curcuminoid, nanoemulsion



# Prototipe Sepeda Listrik Frame Cor untuk mengembangkan produk IKM Pengecoran Logam

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## Abstrak

Sepeda listrik merupakan pengembangan sepeda yang berfungsi sebagai alat transportasi dan sekarang beralih fungsi ke alat olah raga yang sedang diminati masyarakat. Secara umum sepeda listrik terbentuk dari komponen utama yaitu frame, stang, porok, sadel, roda, rem dan di instal motor listrik dari tenaga baterai. Alternatif teknologi produksi frame diperlukan untuk mereduksi ketergantungan bahan baku pipa frame dan proses penyambungan agar frame sepeda dapat diproduksi oleh industri kecil menengah (IKM). Tujuan penelitian ini adalah mengembangkan desain dan membuat frame dengan teknik pengecoran di IKM dan membuat prototipe sepeda listrik.

Metode penelitian dengan riset and development dengan langkah: : (1) Proses analisis kebutuhan geometri; (2) desain frame; (3) simulasi desain frame; (4) validasi dan revisi desain frame; (5) proses produksi frame dengan pengecoran; (6) pengujian frame; (7) revisi akhir frame; (8) analisis kelistrikan; (9) instalasi dan uji coba kelistrikan; (10) produksi prototipe sepeda listrik.

Hasil menunjukkan desain frame memakai bentuk frame modern dengan material Aluminium A356 pada head tube dan seat tube serta material A6061 pada top tube dan button tube. Hasil simulasi frame sepeda menunjukkan tegangan pada material masih dibawah tegangan yang diijinkan. Proses produksi frame sepeda dilakukan dengan 2 teknik yaitu teknik pengecoran di bagian head tube, seat tube dan stay frame, sedangkan teknik pengelasan dilakukan di bagian top tube dan button tube dengan pengelasan TIG. Prototipe sepeda yang dihasilkan ada 2 jenis yaitu Sepeda manual Inobike UNY dengan 27 tingkat kecepatan dan prototipe sepeda listrik hybrid Inobike UNY dengan tenaga baterai 480 W - 5 tingkat kecepatan.

Kata kunci : *sepeda listrik*, *frame cor*, *pengecoran logam*



# STIMULUS FISKAL DI ERA PANDEMI COVID-19 PADA NEGARA-NEGARA ASEAN : STUDI KASUS DI INDONESIA DAN MALAYSIA

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## ABSTRAK

Pandemi Covid-19 saat ini melanda kawasan ASEAN bahkan seluruh dunia pada tahun 2020, sehingga menimbulkan berbagai gangguan langsung pada kegiatan ekonomi seperti; penurunan arus pariwisata, gangguan perjalanan udara, dan melemahnya kepercayaan konsumen dan bisnis karena hampir semua negara memberlakukan kebijakan kunci (isolasi wilayah), pembatasan sosial, karantina masyarakat, penutupan bisnis sementara, dan pembatasan atau larangan perjalanan yang berpotensi mendatangkan atau menyebarkan virus. Penelitian ini bertujuan untuk melakukan analisa tentang stimulus kebijakan fiskal di Negara ASEAN dalam upaya mengantisipasi dampak perekonomian yang diakibatkan dari pandemi Covid-19 terhadap pengaruh yang lebih besar terhadap perekonomian di negara ASEAN. Penelitian ini menggunakan metode penelitian kualitatif deskriptif yaitu metode untuk memahami berbagai konsep yang ditemukan dalam proses penelitian, dengan teknik analisis isi dan riset kepustakaan. Di sisi konsumsi, wabah *COVID-19* menyebabkan meningkatnya ketidakpastian, hilangnya pendapatan pekerja karena terganggunya aktivitas produksi, serta ancaman penularan virus berakibat pada penurunan konsumsi masyarakat. Dari sisi dunia usaha, penyebaran *COVID-19* memberikan gangguan langsung terhadap proses produksi yang disebabkan oleh faktor kesehatan dan kematian dari tenaga kerja, serta adanya karantina atau penguncian wilayah terhadap penyebaran penyakit yang menyebabkan aktivitas ekonomi terganggu.

Kata Kunci: Stimulus Kebijakan Fiskal, Pandemi Covid-19



# PENGEMBANGAN WAYANG KLITIK CERITA JOKO TINGKIR UNTUK MEDIA PEMBELAJARAN KRIYA

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## Abstrak

Penelitian ini bertujuan untuk mengembangkan wayang klitik cerita Joko Tingkir digunakan untuk media pembelajaran seni kriya. Penelitian ini menggunakan pendekatan penelitian pengembangan (Research & Development) untuk mengungkap lakon dan mengembangkan bentuk wayang klitik dan cerita Joko Tingkir untuk bahan ajar. Objek penelitian bentuk wayang klitik tiga dimensi, subjek penelitian para tokoh dan perajin. Instrumen pengumpulan data *human instrument*, pedoman wawancara, observasi, dan dokumentasi untuk menggali data tentang wayang klitik dari berbagai sumber. Analisis data menggunakan analisis deskriptif untuk mengungkap estetika bentuk wayang klitik. Hasil penelitian yang direncanakan yaitu 1) Desain wayang klitik satu cerita Joko Tingkir 2) Pemahaman karakter tokoh yang terkandung dalam cerita Joko Tingkir. Temuan penelitian ini dalam bentuk wayang klitik yang dapat digunakan dalam pembelajaran kriya. Bentuk, estetika, dan fungsi wayang merupakan simbolisasi visual yang menggambarkan karakter tokoh manusia, binatang, dan objek tertentu. Dulu wayang memiliki peran penting dalam kebudayaan masyarakat sebagai benda sakral, religius bergeser pada era modernisasi wayang merupakan karya seni yang diciptakan untuk kebutuhan estetis, praktis, dan ekonomis. Hasil validasi ahli materi modul wayang klitik cerita Joko Tingkir dari aspek materi mendapat skor rerata 3,73 artinya sangat layak, aspek pembelajaran skor 3,6 dan ahli media mendapat skor 3,63 sangat layak sebagai media pembelajaran untuk mata kuliah kriya kayu tradisional. Dalam hubungannya dengan dunia pendidikan wayang ini dapat sebagai media pembelajaran apresiasi dan kreasi seni baik kepada mahasiswa Pendidikan Kriya. Pentingnya penelitian wayang klitik cerita Joko Tingkir untuk kebutuhan referensi sebagai upaya pengenalan, pengembangan, dan pelestarian wayang agar tidak punah dari bumi nusantara.

Kata kunci: Wayang Klitik, Joko Tingkir



# THE STUDY OF ACHIEVEMENT OF THE LEARNING PROCESS STANDARD IN VOCATIONAL HIGH SCHOOLS DURING COVID-19 OUTBREAK IN INDONESIA AND MALAYSIA

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## ABSTRACT

In the educational system, National Education Standards (SNP) are the minimum criteria set by the government as a reference in efforts to fulfil national education standards in the context of minimum service standards. Through existing instruments, it can be done to assess how high the level of achievement of national education standards in a school is. This study aims to determine (1) how high is the achievement of the learning process standards in Vocational High School during the Covid-19 outbreak in Indonesia and Malaysia, (2) what factors are the obstacles and support for the achievement of the learning process standards in Indonesia and Malaysia Vocational High School during the pandemic. This study used a survey method to extract data both qualitatively and quantitatively. The sample in this study were 3 vocational high schools in Indonesia and Malaysia taken by purposive sampling, taking into account the superior, middle and lower vocational schools. Data collection techniques employed were FGD, questionnaires, documents, observation, and online interviews. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated using the informant review model and data triangulation. Quantitative data analysis used descriptive analysis techniques and qualitative data with an interactive analysis model. The results of the study indicate that the achievement of the standard of the education process in Indonesia and Malaysia has been well achieved. The driving factor is a balanced policy and implementation. Some things that can be compared are as follows: the achievement of process standards in national education standards in Indonesia has been achieved well, as well as in Malaysia it has been achieved well with almost the same process standard aspects. Process standards in Indonesia may already have a good concept and have clear measuring tools, but in its implementation, there are still deficiencies in many things related to the ability of resources to digest an educational policy and minimal skills in mastering science and technology.

Keywords: study, national standards, learning process



# MODEL PENDAMPINGAN TERINTEGRASI BERBASIS KINERJA BAGI GURU SMK DI DAERAH ISTIMEWA YOGYAKARTA

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## ABSTRAK

Penelitian ini bertujuan untuk, 1) mengidentifikasi kondisi pengembangan kualitas guru SMK oleh setiap *stakeholder* di Daerah Istimewa Yogyakarta; 2) mengembangkan model pendampingan terintegrasi berbasis kinerja bagi guru SMK di Daerah Istimewa Yogyakarta.

Penelitian ini merupakan penelitian pengembangan (RnD) dengan model ADDIE. Responden penelitian ini adalah guru SMK dan stake holder yang bertanggungjawab ikut mengembangkan kualitas guru yang terdiri dari Kepala Sekolah, Pengawas Sekolah, Dinas Pendidikan, Pemuda dan Olahraga DIY dan Lembaga Penjamin Mutu Pendidikan (LPMP) di Daerah Istimewa Yogyakarta. Penelitian ini akan dilaksanakan dari bulan April sampai dengan Oktober 2021. Teknik pengumpulan data yang digunakan adalah *focuss group discussion* (FGD), wawancara, dokumentasi, dan angket. Teknik analisis data yang akan digunakan adalah teknik analisis diskriptif.

Hasil penelitian menunjukkan bahwa, 1) Kondisi pendampingan atau pembinaan guru SMK di Daerah Istimewa Yogyakarta saat ini belum terintegrasi dan belum berbasis kinerja; 2) Model pendampingan terintegrasi berbasis kinerja bagi Guru SMK di Daerah Istimewa Yogyakarta memuat sistem koordinasi antar stakeholder dan langkah dalam melaksanakan pendampingan yang terdiri dari langkah perencanaan, pelaksanaan, pengendalian/pengawasan dan tindaklanjut.

Kata kunci: model pendampingan, terintegrasi, guru SMK, berbasis kinerja





# EFEK KUALITAS LAYANAN, DUKUNGAN SOSIAL, FINANSIAL, MOTIVASI DAN KEPUASAN TERHADAP KINERJA ATLET PUSAT LATIHAN DAERAH PON YOGYAKARTA

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## Abstrak

Pekan Olahraga Nasional (PON) adalah penyelenggaraan multi kejuaraan olahraga tingkat nasional. Persiapan PON Komite Olahraga Nasional (KONI) menyelenggarakan Pemusatan Latihan Daerah (Puslatda) yang diikuti oleh atlet level 1, dan atlet level II yang lolos babak kualifikasi PON. Pelaksanaan Puslatda melibatkan KONI DIY sebagai penyelenggara dengan pemerintah daerah, pengurus daerah cabang, atlet, dan pelatih. Pemerintah daerah memberikan dukungan dana hibah yang diberikan setiap tahun sesuai dengan Rancangan Anggaran Belanja (RAB) yang disusun oleh KONI DIY.

Dukungan sosial Puslatda diberikan dari lingkungan keluarga, orang tua atlet, dan klub olahraga terhadap atlet akan memaksimalkan kinerja atlet. Kinerja atlet dalam Puslatda PON memerlukan kualitas layanan yang baik untuk meningkatkan motivasi dan menciptakan kepuasan bagi atlet. Dalam Puslatda PON terjadi persaingan yang ketat diantara provinsi dalam mempersiapkan layanan dari segi peralatan dan fasilitas yang memenuhi standard internasional, kualitas pelatih, dukungan dana yang kuat, sehingga atlet tetap bertahan di daerahnya. Persaingan bantuan finansial yang besar dari daerah sering menggoda atlet untuk pindah ke lain daerah, misalnya uang transport atlet, bantuan ekstra fooding, dan honorarium Puslatda. Dengan demikian eksplorasi tentang kualitas layanan, dukungan sosial, finansial, motivasi dan kepuasan menjadi topik yang menarik untuk diteliti dan dibahas dalam usaha meningkatkan kinerja atlet Puslatda PON.

Ketidakpuasan atlet Puslatda KONI adalah sebuah topik yang kurang diteliti bila dibandingkan dengan kepuasan dalam manajemen layanan di umum. DIY sebagai daerah dengan APBD kecil maka pengangggaran untuk persiapan Puslatda juga terbatas, namun apabila dilihat hasil PON XIX tahun 2016 DIY dapat menduduki rangking sepuluh dengan perolehan medali 16 emas, 15 perak, 25 perunggu. Mengingat keterbatasan DIY dari segi finansial yang kecil sering menjadi incaran daerah lain untuk membeli atlet potensial untuk Puslatda PON dengan honorarium yang lebih besar. Tradisi budaya di DIY berbeda dengan daerah lain, atlet yang sudah terbiasa hidup sederhana dengan lingkungan sosial menerima apa adanya merupakan faktor motivasi intrinsik dalam mendukung kinerja atlet. Berdasarkan paparan di atas maka peneliti ingin melakukan penelitian berjudul "Pengaruh Kualitas Layanan, Dukungan Sosial, Finansial, Motivasi, dan Kepuasan terhadap Kinerja Atlet."

Tujuan dari penelitian ini adalah untuk: menguji pengaruh kualitas layanan terhadap motivasi atlet, menguji pengaruh kualitas layanan terhadap kepuasan atlet, menguji pengaruh dukungan sosial terhadap motivasi atlet, menguji pengaruh dukungan sosial terhadap kepuasan atlet, menguji pengaruh finansial terhadap motivasi atlet, menguji pengaruh finansial terhadap kepuasan atlet, menguji pengaruh motivasi terhadap kepuasan atlet, menguji pengaruh kepuasan terhadap kinerja atlet.

Untuk merealisasikan tujuan tersebut, maka tahapan metode penelitian (1) analisis dokumen, (2) pengumpulan data melalui kuesioner, (3) analisis data menggunakan structural pemodelan persamaan (SEM) untuk secara bersamaan menguji semua hubungan dalam model SEM merupakan metode statistik yang menggunakan pendekatan konfirmatori dalam melakukan analisa multivariat.



Hasil menunjukkan (1) Kualitas layanan tidak berpengaruh signifikan terhadap motivasi atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.061. Dapat disimpulkan bahwa kualitas layanan tidak berpengaruh signifikan terhadap motivasi, sehingga H1 dalam penelitian ini ditolak. (2) Kualitas layanan berpengaruh positif dan signifikan terhadap kepuasan atlet Puslatda PON XX DIY, dengan nilai P sebesar 0,000. Dapat disimpulkan bahwa kualitas layanan berpengaruh signifikan terhadap kepuasan, sehingga H2 dalam penelitian ini diterima. (3) Kualitas layanan berpengaruh positif dan signifikan terhadap kinerja atlet Puslatda PON XX DIY, dengan nilai P sebesar 0,002. Dapat disimpulkan bahwa kualitas layanan berpengaruh signifikan terhadap kinerja atlet Puslatda, sehingga H3 dalam penelitian ini diterima. (4) Kualitas layanan berpengaruh positif dan signifikan terhadap lingkungan sosial atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.000. Dapat disimpulkan bahwa kepuasan (satisfaction) berpengaruh signifikan terhadap lingkungan sosial atlet Puslatda, sehingga H4 dalam penelitian ini diterima. (5) Kualitas layanan berpengaruh positif dan signifikan terhadap finansial atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.000. Dapat disimpulkan bahwa kualitas layanan berpengaruh signifikan terhadap finansial atlet Puslatda, sehingga H5 dalam penelitian ini diterima. (6) Lingkungan sosial berpengaruh positif dan signifikan terhadap motivasi atlet dengan nilai P sebesar 0.000. Dapat disimpulkan bahwa lingkungan sosial berpengaruh signifikan terhadap motivasi, sehingga H6 dalam penelitian ini diterima. (7) Lingkungan sosial tidak berpengaruh signifikan terhadap kepuasan atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.146. Dapat disimpulkan bahwa lingkungan sosial tidak berpengaruh signifikan terhadap kepuasan atlet Puslatda, sehingga H7 dalam penelitian ini ditolak. (8) Lingkungan sosial tidak berpengaruh signifikan terhadap kinerja atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.675. Dapat disimpulkan bahwa lingkungan sosial tidak berpengaruh signifikan terhadap kinerja atlet Puslatda, sehingga H8 dalam penelitian ini ditolak. (9) Lingkungan sosial tidak berpengaruh signifikan terhadap finansial atlet Puslatda PON XX DIY, dengan P sebesar 0.677. Dapat disimpulkan bahwa lingkungan sosial tidak berpengaruh signifikan terhadap finansial atlet Puslatda, sehingga H9 dalam penelitian ini ditolak. (10) Finansial tidak berpengaruh signifikan terhadap motivasi atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.270. Dapat disimpulkan bahwa finansial tidak berpengaruh signifikan terhadap motivasi atlet Puslatda, sehingga H10 dalam penelitian ini ditolak. (11) Finansial berpengaruh positif dan signifikan terhadap kepuasan atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.000. Dapat disimpulkan bahwa finansial berpengaruh signifikan terhadap kepuasan atlet Puslatda, sehingga H11 dalam penelitian ini diterima. (12) Finansial tidak berpengaruh signifikan terhadap kinerja atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.616. Dapat disimpulkan bahwa finansial tidak berpengaruh signifikan terhadap kinerja atlet Puslatda, sehingga H12 dalam penelitian ini ditolak. (13) Motivasi tidak berpengaruh signifikan terhadap kepuasan atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.291. Dapat disimpulkan bahwa motivasi tidak berpengaruh signifikan terhadap kepuasan atlet Puslatda, sehingga H13 dalam penelitian ini ditolak. (14) Motivasi berpengaruh positif dan signifikan terhadap kinerja atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.003. Dapat disimpulkan bahwa motivasi berpengaruh signifikan terhadap kinerja atlet Puslatda, sehingga H14 dalam penelitian ini diterima. (15) Kepuasan tidak berpengaruh signifikan terhadap kinerja atlet Puslatda PON XX DIY, dengan nilai P sebesar 0.563. Dapat disimpulkan bahwa kepuasan tidak berpengaruh signifikan terhadap kinerja atlet Puslatda, sehingga H15 dalam penelitian ini ditolak.

Kata kunci: kualitas layanan; finansial; kepuasan; lingkungan sosial; atlet puslatda



# PENGEMBANGAN INSTRUMEN REAKTIF AGILITY DAN KOORDINASI MATA TANGAN UNTUK IDENTIFIKASI BAKAT TENIS MEJA

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## Abstrak

Reactive agility dan kordinasi merupakan komponen biomotor tenis meja. Mengapa penting karena kinerja tenis meja memerlukan kecepatan gerakan ke samping ke depan serta memerlukan gerakan antisipasi rangsang dari depan atau stimulus. Oleh karena itu perlu alat tes reactive agility dan kordinasi yang valid dan reliabel. Tujuan penelitian ini adalah untuk menguji validasi ahli tes reactive agility, koordinasi mata-tangan untuk tenis meja. Pada tahun pertama metode penelitian menggunakan metode campuran kualitatif dan kuantitatif. Parsitipan penelitian menggunakan dokumen dan tuju ahli. Prosedur penelitian terdiri dari dua langkah. Langkah pertama menggunakan metode literature review untuk mendefinisikan konsep dan operasional penilaian reactive agility dan koordinasi mata-tangan tenis meja. Langkah kedua mendesain konstruksi tes reactive agility dan koordinasi mata-tangan tenis meja. Langkah ke tiga uji validitas ahli. Analisis data menggunakan analisis tematik dan menggunakan formula Aiken. Hasil penelitian menunjukkan bahwa validitas isi (1) aspek kesesuaian definisi konsep reactive agility  $V = 0,851$ , (2) aspek kesesuaian jumlah stimulus  $V = 0,889$ , (3) aspek kesesuaian jarak  $V = 0,926$ , (4) aspek kesesuaian langkah  $V = 0,926$ , (5) aspek prosedur tes  $V = 0,815$ , (6) aspek kesesuaian gambar kontruksi  $V = 0,962$ . Selain itu juga menghasilkan validitas isi (1) aspek kesesuaian konsep koordinasi  $V = 0,952$ . (2) aspek kesesuaian jumlah stimulus  $V = 0,857$ . (3) aspek kesesuaian jarak  $V = 0,952$  (4) aspek kesesuaian gerakan  $V = 0,857$  (5) aspek kesesuaian prosedur tes  $V = 0,857$ .

Kata kunci: tes; agility; koordinasi; tenis meja



# PENGEMBANGAN PENILAIAN AUTENTIK HASIL BELAJAR PENDIDIKAN JASMANI SEKOLAH DASAR MATERI PERMAINAN

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## Abstrak

Penilaian otentik hasil belajar penting dalam pembelajaran penjas, namun masih sedikit penilaian hasil penelitian tentang penilaian otentik khususnya permainan invansi sepak bola. Tujuan penelitian pada tahap satu adalah untuk mengembangkan draf instrumen penilaian otentik yang tervalidasi oleh ahli. Pada tahun pertama dalam penelitian ada dua tahap yaitu Define dan Desain yang terdiri dari empat langkah sebagai berikut. Langkah pertama studi pendahuluan dengan teknik analisis dokumen dengan teknik literature review untuk mendefinisikan konsep dan operasional penilaian autentik hasil belajar permainan peserta didik sekolah dasar. Langkah kedua mendesain tujuan, tugas dan rubrik penilaian autentik dengan teknik literature review. Langkah ketiga menilaikan definisi, tujuan, tugas dan rubrik pada ahli dengan teknik Delphi untuk memperoleh tingkat kesepakatan ahli (validasi isi). Partisipan menggunakan dokumen dan sembilan ahli. Langkah keempat analisis data menggunakan formula Aiken,s. Hasil penelitian telah menunjukkan (1) ada kelemahan dan kekurangan penilaian otentik yang sudah ada terutama pada penilaian otentik pada sepak bola. (2) Tervalidasi isi semua item penilaian otentik hasil belajar sepak bola.

Kata kunci: Penilaian; otentik; hasil belajar; pendidikan jasmani; permainan



# Civic Education as Value Education for Citizens in Society 5.0 Era

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## Abstract

This article aims to explore the values that exist in civic education so that it can be used as value education in Society 5.0 era. From the values explored, it is hoped that they can be a reference to form smart and good citizens. This article was written using the literature study method so that the object of study in this article is in the form of research journals, books and other notes related to the study of civic education, values education and Society 5.0 era. This article raises the issue of the transition from industry 4.0 to Society 5.0 era and how it relates to the study of civic education as value education. Civic education as value education is intended so that citizens can understand and behave in accordance with the values that lead them to become smart and good citizens so that they are ready to face the challenges of the transition from industry 4.0 to Society 5.0 era. From the results of the discussion, it is known that the values of civic education can be used as value education which can then provide an overview and framework to prepare citizens who can face and adapt to Society 5.0 era and remain guided by National principle.

Keywords: Civic education, values education, Society 5.0 era



# A CRITICAL ANALYSIS OF MATHEMATICS CURRICULUM AT ISLAMIC BOARDING SCHOOL (PESANTREN)

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## Abstract

*Islamic Boarding School, or Pesantren as the oldest educational institution in Indonesia, provides a unique attraction for research. The curriculum in Pesantren that integrates religious learning and general learning provides challenges for teachers in implementing learning. Although it has several advantages over public schools, Pesantren also has several problems. One of them is related to curriculum implementation. Therefore, this study aims to analyze the application of the Curriculum 2013 in Mathematics learning at one of Pesantrens in Makassar. This research was in the form of qualitative research by interviewing four respondents, including the founder of boarding school, principal, deputy headmaster of curriculum section, and math teacher at Aliyah/Senior High School level. The findings of this study are: (1) the curriculum policy at Pesantren has not been understood collectively by education practitioners in the school, (2) The readiness in curriculum formulation is considered not optimal, and (3) The implementation of the curriculum 2013 in mathematics learning in Pesantren is not optimal due to other rules such as the determination of learning hours which are very lacking. Thus, this should be an essential note for Pesantren in Makassar to improve the implementation of its curriculum.*

Keywords: curriculum, mathematics education, Islamic boarding school.



# THE IMPLEMENTATION OF THE COOPERATIVE LEARNING MODEL OF STUDENT TEAMS ACHIEVEMENT DIVISION (STAD) TO IMPROVE LEARNING ACTIVENESS AND OUTCOMES OF GRADE VII C STUDENTS IN THE SOCIAL STUDIES SUBJECT AT SMP NEGERI 2 NGEMPLAK

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## Abstract

This study aimed to investigate: (1) efforts to improve learning activeness and outcomes of Grade VII C students of SMP Negeri 2 Ngemplak in the Social Studies subject using the cooperative learning model of Student Teams Achievement Division (STAD), and (2) the improvement in their learning activeness and outcomes in the Social Studies subject using the cooperative learning model of STAD.

This was a classroom action research (CAR) study. The research subjects used were Grade VII C students of SMP Negeri 2 Ngemplak in the even semester of the 2018/2019 academic year, with a total of 32 students. The study was conducted in two cycles each of which consisted of two meetings. The data were collected using observation sheets, tests, and documentation. The data analysis techniques were qualitative and quantitative descriptive techniques. Related to the criteria for the research success, students' learning activeness was considered improving if on average 70% in one class were active in learning activities. As for students' learning outcomes, a minimum of 75% achieved a Minimum Mastery Criterion (MMC) of 75.

The results of the study were as follows. (1) Efforts to improve learning activeness and outcomes of Grade VII C students in Social Studies at SMP Negeri 2 Ngemplak using the STAD learning model were carried out with the following steps: dividing groups, determining initial scores, building groups, exposing materials, studying in groups, working on quizzes, calculating individual and group scores, recognizing group achievements and returning quiz results by emphasizing group discussions, individual skills and working on quizzes. (2) The use of this learning model improved the learning activeness and outcomes of Grade VII C students in the Social Studies subject at SMP Negeri 2 Ngemplak. This could be seen from their learning activities in Cycle I by 61.48%, improving to 75.0% in Cycle II. Their learning outcomes could be seen from a mean of 74.81 in Cycle I with the mastery by 63%, improving in Cycle II with a mean of 83.53 and the mastery by 91%.

Keywords: *Student Teams Achievement Division (STAD), Learning Activeness, Learning Outcomes*



# CREATIVE PEDAGOGY AS AN INNOVATION IN SOCIAL STUDIES TEACHING AND LEARNING TO PROMOTE 21<sup>st</sup> CENTURY SKILLS

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## Abstract

The 21<sup>st</sup> century provides many changes in social life that need to be responded and adapted by the education. Education needs to provide students with 21<sup>st</sup> century skills so that they are able to carry out partnerships optimally. One way is to develop creative pedagogy in learning. This study aims to describe creative pedagogy as an innovation in social studies learning to promote students' 21<sup>st</sup> century skills. The research method used is a type of qualitative research. The subjects of the study were two social studies expert and 15 social studies teachers at junior high schools in Yogyakarta. Data collection techniques used individual interviews and FGDs. The first stage is in the form of individual interviews conducted with two social studies learning experts. The second stage of data collection was carried out by FGDs with social studies teachers at junior high schools in the province of Yogyakarta. Individual interviews and FGDs were conducted online using the Zoom and Google Meet applications. The data collected from the two stages of data collection were then analyzed, synthesized and verified as a final conclusion.

Keywords: creative pedagogy, innovation, social studies learning, 21<sup>st</sup> century skills





# Creative Business Development in Facing the Adaptation of New Habits Era in Nonalia Batik SME

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## Abstract

Small and Medium Enterprises (SMEs) are one of the sectors most affected by the Covid-19 pandemic in Indonesia. Batik Clothes's SME is also one of the SMEs affected by COVID-19 quite large because the main market is tourists who are visiting. One of the Batik Clothes's SMEs affected by COVID-19 in Yogyakarta is Nonalia Batik SME. The Nonalia Batik SMEs is located in the village of Wijirejo, Pandak District, Bantul Regency, Yogyakarta. Nonalia Batik SME's is still fairly conventional because it only sells products at its outlets, distributes it in several traditional markets and is only able to reach local markets. Diversification of batik products is also one of the obstacles for the Nonalia Batik SME. Currently, almost all business actors are required to adapt to the needs of the New Habit Adaptation (IMR) era. Meanwhile, the Nonalia Batik SME, has not been able to quickly adapt to the needs of consumers in this era. The method to overcome the problems are facilitating training for the development of batik product diversification and facilitating product introduction through creative business development. The results are there are at least 3-4 new products produced by Nonalia Batik SME in the IMR, Nonalia Batik SMEs have been able to create 3 social media campaigns and already have a batik gallery display of their products and have also understood the material (70%) regarding the preparation of Edu tourism program.

Keywords: IMR Era, Product Diversification, Small and Medium Enterprises, Social Media Campaign



# INCREASE STUDENTS' WRITING ABILITY THROUGH SELF-ASSESSMENT METHOD

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## Abstract

The purpose of this study is applied self-assessment method to increase the students writing ability in Intermediate writing course. This study used pre-experimental method with one group pre and post-test design. This study conducted at English Program Study of STKIP Taman Siswa Bima. Sample of this study is one class which treats by using self-assessment method. The sample is semester II in Academic years 2020/2021, which consists of 22 students in Intermediate course class. The data was taken by several steps such as: a) pre-test by using essay test, b) students' writing ability which scoring by using self-assessment, c) post test by using essay test. In conducted this study the students were write into 5 types of text, such as descriptive, opinion, instruction, recount, and narrative texts. Students write, score, and evaluate their texts by using self-assessment in 11 times.

The result of this study is pre-test of the students showed a minimum score got by the students is 43 with category very poor, while the high score or maximum score is 65 with category good to average. This score indicates the students' writing ability was low and need to be improved. Post-test result of the students showed the low or minimum score were get by the students was 75 with category good to average, and the high or maximum score of the students were 90 with category excellent to very good. The high total score of students writing ability assess by students itself using self assessment method is 928, and the low total score is 631.

Keywords: Student's Writing Ability, Self-Assessment method



# RESEARCH TRENDS OF THE INDONESIAN AS SECOND LANGUAGE LEARNING: A BIBLIOMETRIC ANALYSIS

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## Abstract

Indonesian as second language learning is becoming a research trend, both in a native speaker or foreign speaker. Unfortunately, there was a lack of research that sketched the research trends on Indonesian as second language learning. In filling this gap, this study aims to map the research trends of Indonesian as second language learning in Google Scholar and Crossref. This study was conducted by bibliometric analysis involving research articles on Indonesian as second language learning in 2016-2021. The research instrument was the Publish or Perish application to collect metadata from Google Scholar and Crossref. The data were analyzed by using VOSviewer applications to visualize some aspects of research trends: network, overlay, and density of those researches. This study was found that there were four research clusters, they are (1) Indonesian language learning in the school context, (2) learner profile and foreign language, (3) second language acquisition, second language learner, speaker, and (4) the form of acquisition, first language, and foreign language learning. Based on the overlay visualization, research trends in 2016-2018 were second language learning, second language learner, first language, and communication interaction. Research trends in 2016-2021 focused on Indonesian language learning in the school context based on the learning model, curriculum, learning quality, learning effectivity, and attitude and knowledge of the learner. The research density of Indonesian as second language learning research focuses on the learner profile in Indonesian as second language learning. Besides, there was a lack of research about learning outcome, learning effectivity, curriculum, learning quality, and anxiety and attitude of language learners.

Keywords: bibliometric analysis, Indonesian, language learning, research trends, second language learning



## **In search of overseas graduate identity: stories from struggling scholars**

**Ashadi, Triastuti, Ciptaningrum & Barkhuizen**

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Overseas education is attractive for those who wish to earn different insights, enhance academic profiles, and expand international networks. Yet, it could be the opposite when the unpredictable and unfavourable experiences start to exist. This study has shown that relying on intelligence only does not suffice the demand for overseas doctoral education. It takes more than that, in other words, those who wish to study overseas must equip themselves with academic, socio-cultural, and financial back-ups. These will help them to deal with the unfavourable and unpredictable situations in their academic, social, and financial lives more effectively.

Afterwards, supportive environment in the overseas accommodation (family, roommates & friends) and in the home country (family & colleagues) is crucial in the aftermath. The participants rebound have shown a diverged pattern: some could move on easily and proceeded with their next challenges, others seemed to still be haunted by the failure, while the rest tried to reorient their future by focussing on another challenge in their lives. Their identities are likely to be tested whether to stick with their original plan or to reorient a new career and life path.



# RESEARCH ROADMAP OF GRAPHIC DESIGN STUDY PROGRAM UNESA

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## Abstract

Applied Undergraduate Graphic Design Study Program, Vocational Program Unesa as one of the newly established programs needs to develop a 15 (fifteen) year (2020-2035) long-term research roadmap program and a short-term 5-year period. The purpose of this study is to describe the research road map of the Graphic Study Program as the direction and purpose of research. The content of the Research Roadmap includes research activities that have been carried out by the researcher several years earlier on this topic, the research plan, as well as the research direction plan after the proposed activity is completed. This research is policy research used by Anderson (2011) by carrying out five stages, namely: Identification, Formulation, Adoption, Implementation, and Evaluation. Data collection techniques used: interviews, documentation, and literature. This research resulted in a research roadmap model for the Graphic Design study program. The road map is based on the expertise of the study program lecturers and research that has been done previously, the research expertise group of the Unesa Graphic Design Study Program in Graphic Design in visual signs, Graphic Design, and local culture, and Graphic Design and learning. The series of research roadmaps for the Unesa Graphic Design Study Program starts from basic research, followed by small-scale applied research and then large-scale research related to production, innovation, and industry.

Keywords: research roadmap, Graphic Design Study Program, graphic design



# THE ROLE OF THE PPKN TEACHER IN ANTICIPATING SARA VIOLATIONS AMONG AL-AZHAR 3 SHS STUDENTS IN BANDAR LAMPUNG

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## Abstract

The teacher's role in learning is an action or behavior taken by the teacher in influencing students in the learning process to achieve the goals that have been set. This causes that the teacher's role in the learning and teaching process is very important to the success of the process. Seeing and observing the situation around the Indonesian people lately, the Indonesian people are being tested with various existing issues, ranging from issues of ethnicity, race, religion and between groups. This has an impact on the emergence of intolerant behavior, bullying behavior, acts of discrimination, primordialism behavior to cultural differences. The ability of teachers in choosing a learning approach greatly affects the involvement of students in the learning process. The role of the teacher is to actively guide, assist students in learning procedures, examine materials and problems, the ability required is the understanding of the teacher to understand the skills and foresight of students in learning both individually and in groups. The results of this study indicate that there is a teacher's role in anticipating SARA violations among students categorized as having a role or good, which is seen from the results of the questionnaire distribution which shows that the three teacher roles as indicators have a high presentation, namely 77.8% of teachers act as educators, and as many as 77.8% of teachers act as directors and as many as 80.6% of teachers act as mentors. It is said to play a role because students already understand the violation of SARA and can also implement the values contained in Bhineka Tunggal Ika regarding the importance of respecting differences. Teachers are felt to have played a role in providing learning and role models for students.

Keywords: SARA, Students, Teacher's Role



# Developing Blended Laboratory Application Based on Augmented Reality in Virtual Practices to Improve Students' Digital Literacy and Conceptual Understanding

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## Abstract

This study aims at (1) producing a blended laboratory application based on augmented reality (BLABAR) that is feasible for a virtual practicum of science course among junior high school students, (2) analyzing the practicality of the BLABAR based on the teachers' assessment, and (3) knowing the escalation of digital literacy and students' conceptual understanding of concepts after using the BLABAR for virtual practicum activities. This research belongs to a research and development (R&D) with ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The BLABAR in Virtual Practicum was tested in the experimental class, while the control class used a Flash-based virtual practicum. The sample was determined by cluster random sampling. The instrument in this research used a test of digital literacy and conceptual understanding that had been validated theoretically and empirically. The obtained data were analyzed with MANOVA to test the differences of students' digital literacy and conceptual understanding between the two groups of students. The results of the BLABAR quality assessment were analyzed descriptively quantitatively including sub-indicators of feasibility and practicality of the developed learning media. The results showed that (1) the BLABAR for virtual practicum refers to an interactive simulation application of complete science experiments with 3D tools, materials, and practicum space, (2) the quality of BLABAR based on the assessment of the material experts and the media experts can be categorized as very good in terms of its appropriateness with the characteristics of science material, language construction, and media display, and (3) based on the MANOVA test of sig. 0.001, there is a significant difference in students' digital literacy and conceptual understanding for those who have the BLABAR virtual practicum compared to the Flash-based virtual practicums and real laboratories activities.

Keywords: BLABAR, blended learning, digital literacy, and conceptual understanding



# **METODE PRESENTASI TERBUKA TRIK JITU MENINGKATKAN PERCAYA DIRI SISWA DALAM MENARI TRADISIONAL**

**Desilia Kusmitantia Wardani**

## **ABSTRAK**

Penulisan Makalah Tinjauan Ilmiah ini bertujuan untuk mengetahui peningkatan percaya diri siswa melalui penerapan metode pembelajaran Presentasi Terbuka yang diterapkan pada kelas VIII semester 2 di SMP Negeri 3 Kandangan tahun pelajaran 2019/ 2020.

Penulisan Makalah Tinjauan Ilmiah ini menggunakan teknik pengumpulan data berupa lembar observasi percaya diri dalam pembelajaran seni tari dengan materi tari tradisional.

Hasil penerapan metode Presentasi Terbuka pada kelas VIII SMP Negeri 3 Kandangan, semester 2 tahun pelajaran 2019/2020 adalah sebagai berikut: 1) Metode Presentasi Terbuka telah mampu meningkatkan percaya diri siswa kelas VIII di SMP Negeri 3 Kandangan dalam menari tradisional dengan urutan alurnya yang pertama guru membagi siswa menjadi beberapaketompok dalam satu kelas, kedua siswa dan kelompoknya berdiskusi untuk menentukan tari yang akan ditampilkan serta menyusun jadwal latihan bersama, ketiga Siswa dan kelompoknya melakukan latihan tari tradisional beserta dengan pola lantai dan musiknya secara mandiri di rumah (bisa menentukan sendiri tempatnya), keempat siswa dan kelompoknya mempresentasikan gerak tari beserta dengan pola lantai dan musiknya di panggung terbuka SMP Negeri 3 Kandangan dengan dipantau oleh guru, kelima guru mereview hasil presentasi siswa dan memotivasi siswa untuk tampil dengan lebih baik dan percaya diri, serta menyampaikan kelebihan dan kekurangan setiap kelompok, keenam siswa menjalani penilaian dengan mementaskan tari tradisional lengkap dengan pola lantai dan unsur penunjang tari sesuai iringan musik di atas panggung.2) Besarnya peningkatan percaya diri siswa dalam menari tradisional adalah kelas 8A sebesar 40%, kelas 8B sebesar 41%, kelas 8C sebesar 34%, dan kelas 8D sebesar 24%.

Kata Kunci: Percaya Diri, Presentasi Terbuka





# Improved Performance of Corrugated Metal gaskets on Boiler's Piping System Through Multi Layered Coating

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## Abstract

The corrugated metal gasket is still in the early stages of development. However, gasket contact flanges with a high surface roughness (more than 3.5m) leak and require a lot of force to tighten. The goal of this study is to use copper and nickel coatings to improve the performance of corrugated metal gaskets. Copper or nickel infiltrates the pipe flange's rough surface, preventing leaking. The purpose of this study is to investigate the performance of a coated corrugated metal gaskets in a boiler system. The water leak was trickling on the white paper that had been placed beneath the gasket. The thermal camera can detect vapor leaks. The results of the studies reveal that the corrugated gasket's performance is improving, as seen by the reduction in leakage. At highest pressure and lowest tightening force, neither type of gasket leaked.

*Keywords:* Coating, corrugated metal gaskets, performance, multilayered, boiler



# Assessment of Dance Practice Performance Using Rater

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## ABSTRACT

Innovative dance performance assessment practices have the potential to change the way educational institutions function. By focusing on well-designed assessment tasks, where students are expected to work collegially and actively engage in performance appraisals, the opportunity to involve raters in the assessment process is realized. This article states that measuring movement skills by practicing dance lessons can actually be done with a performance-based assessment that is not limited to product assessment, but also process assessment. This will certainly be related to the assessment of learning outcomes, where skill learning generally uses performance assessments which in this case are difficult to measure with tests when evaluating performance assessments, we think that it is important to recognize that fairness is directly related to the quality of ratings resulting from interpretations. assessor of student performance, which is mediated by cues unique to the particular assessment context. An important issue that arises from observing dance practice is that it is the element of subjectivity of the examiner who is accustomed to using his "sense of art". This requires an assessment system that is focused, in-depth and uses more than one appraiser, so that the performance assessment has a high level of realism and is acceptable. These facts lead the writer to explain the concept of a new performance assessment model that focuses on authentic learning and authentic assessment of dance practice learning. Ratings through raters are used worldwide, and it is important to recognize the value of building a scoring system that produces valid, reliable and fair scores to inform our decisions. We strongly believe that psychometric judgments based on human judgments can be developed and maintained following the suggestions we made in this article.

Keywords : Performance Assessment; Rater; Dance



## PEMBELAJARAN SENI RUPA MASA PANDEMI COVID-19: GAMBARAN CORONA DALAM KARYA SISWA SDN 4 PENYARANG

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### Abstrak

Seni rupa anak menggambarkan keberagaman karakteristik perkembangan anak sesuai latar belakangnya masing-masing. Selain mempengaruhi pelaksanaan pembelajaran seni rupa, pandemi covid-19 dengan pembatasan sosial yang ketat juga telah memberi pengaruh terhadap perkembangan kognitif, psikologi dan psikomotorik anak. Artikel ini berupaya menganalisis pelaksanaan pembinaan seni rupa anak di sekolah dasar selama masa pandemi covid-19 untuk memahami bagaimana kualitas pembelajaran seni rupa di Sekolah Dasar selama Pandemi covid-19 dan bagaimana pengaruhnya terhadap karya seni rupa anak. Penelitian ini merupakan penelitian deskriptif kuantitatif dengan metode studi kasus di Sekolah Dasar Negeri (SDN) 4 Penyarang Data diambil dengan melakukan wawancara, observasi dan dokumentasi serta dianalisis secara sistematis dan semiotika. Pelaksanaan pembelajaran seni rupa secara luring di SDN 4 Penyarang dilaksanakan dengan berbagai penyesuaian seperti pengurangan mata pelajaran per hari, pengurangan durasi pembelajaran dan pelaksanaan protokol kesehatan. Pembelajaran seni rupa berupa aktivitas menggambar bebas. Sebagian besar siswa cenderung menggambar lingkungan sekitarnya. Namun, ada beberapa siswa yang unik yang simbol-simbol virus corona. Hal ini menggambarkan kondisi pandemi covid-19 yang telah mempengaruhi aspek kognitif dan afektif/psikologis siswa. Secara kebiasaan, mereka menjadi lebih dekat dengan aktivitas-aktivitas di dalam rumah sehingga mereka banyak menggambarkan kejadian yang mereka alami di dalam rumah seperti bermain *game* dan beribadah.

Kata Kunci: pembelajaran seni rupa, pandemi covid-19, karya siswa SD



# Literasi Teknologi Informasi dan Komunikasi Pengelola *Community Learning Center* dalam Mengelola Pendidikan Nonformal pada Masa Pandemi Covid-19

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## ABSTRAK

Penelitian ini bertujuan memahami penguasaan literasi teknologi informasi dan komunikasi (TIK) pengelola CLC, dan proses belajar pengelola CLC dalam menguasai literasi TIK dalam masa pandemic Covid-19. Penelitian ini dilakukan sebab literasi TIK pengelola CLC menjadi kunci keberhasilan CLC dalam beradaptasi dan menghadapi perubahan masyarakat dalam bentuk pandemic Covid-19 yang menimbulkan berbagai dampak pada pendidikan. Penelitian ini merupakan *explanatory sequential mixed methods design* dan dilakukan pada semua CLC di wilayah D.I. Yogyakarta. Data kuantitatif dikumpulkan terlebih dahulu dengan menyampaikan angket online kepada semua pengelola CLC atau sebanyak 121 lembaga dan sebanyak 57 responden pengelola mengembalikan angket. Data dari angket dianalisis menggunakan bantuan software excel. Selanjutnya, untuk menguatkan data kuantitatif, data kualitatif dikumpulkan dengan wawancara kepada beberapa pengelola CLC yang ditentukan secara purposive, dan dengan analisis dokumentasi mengenai pelaksanaan kegiatan CLC. Data kualitatif dianalisis dengan teknik analisis kualitatif. Dalam penelitian ini, triangulasi dan afirmasi dari informan/sumber data dilakukan untuk mengetahui keabsahan data kualitatif, dan untuk memperoleh validitas angket dilakukan *judgment expert* dengan ahli pendidikan dan teknologi pembelajaran. Hasil penelitian menunjukkan bahwa para pengelola CLC sudah dapat menguasai literasi TIK sebagai instrument untuk menyesuaikan diri dengan situasi krisis Pandemic Covid-19 walau masih dominan pada penggunaan TIK untuk pembelajaran maupun pengelolaan. Penguasaan literasi ini tidak lepas dari proses belajar yang ditempuh pengelola baik secara mandiri maupun kolektif yang dipandang memberikan manfaat bagi mereka sebagai pengelola CLC. Maka, untuk meningkatkan mengembangkan kemampuan mereka agar lembaga CLC dapat resilience, pengembangan literasi TIK pengelola perlu dilakukan berdasarkan pada kebutuhan objektif, menggunakan kemajuan TIK, dan terintegrasi dengan pekerjaan pokoknya agar terjamin kebemanfaatan yang berskala besar.

Kata kunci: literasi, teknologi informasi dan komunikasi, CLC, pengelola, pendidikan nonformal



# Proses Kreatif Penciptaan Tari Kupu-kupu Sebagai Sarana Menumbuhkan Nilai Edukasi Terhadap Siswa Sekolah Dasar di Era *Covid-19*

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## Abstrak

Merebaknya virus *Covid-19* belakangan ini berdampak pada bidang pendidikan di Indonesia. Dampak yang paling besar terjadi pada sektor seni yang berhubungan dengan kegiatan proses kreatif. Seperti halnya pada kajian ini, sebagaimana aktivitas berkesenian utamanya dalam proses kreatif penciptaan sebuah tari menjadi terganggu, dengan demikian perlunya seorang pendidik atau guru harus memiliki sebuah kreativitas untuk mencari solusi atas tantangan tersebut. Pembahasan ini akan menguraikan bagaimana seorang guru menuangkan ide kreativitasnya meskipun ditengah masa pandemi *Covid-19*. Dalam hal ini guru selaku koreografer tetap berproses menciptakan sebuah tarian. Salah satunya tari Kupu-kupu. Tari Kupu-kupu ini diciptakan bertujuan untuk menarik minat siswa Sekolah Dasar terhadap seni tari dan nilai-nilai tradisi yang disisipi dengan nilai edukasi. Pokok bahasan ini berfokus untuk mendeskripsikan langkah kreatif penciptaan tari Kupu-kupu dan memotivasi pendidik agar tetap kreatif dalam menciptakan inovasi meskipun di tengah masa pandemi *Covid-19*. Metode penciptaan tari Kupu-kupu ini menggunakan metode penciptaan Alma M. Hawkins, dimana didalamnya terdiri dari 3 tahap utama, antara lain proses eksplorasi, proses improvisasi dan komposisi. Sementara untuk bentuk penyajiannya memiliki unsur-unsur pembentuk tari menurut Suzanne K. Langer, antara lain gerak, musik, tata rias, busana, pola lantai, tempat dan waktu pementasan. Hasil dari proses kreatif penciptaan tari Kupu-kupu ini menghasilkan 42 motif dan 11 paket ragam gerak, 11 alat musik dengan 4 motif tabuhan (pukulan pola instrumen), menggunakan riasan eyeshadow berwarna cerah seperti paduan warna ungu muda, kuning, dan merah muda, sesuai dengan busana dan aksesoris yang dikenakan, serta tempat dan waktu pementasan yang bisa dilaksanakan dimana saja. Tari Kupu-kupu ini bisa dijadikan stimulus untuk terciptanya tarian yang diciptakan khusus untuk siswa sekolah dasar guna mendukung proses pembelajaran seni budaya daerah Lampung. Tari Kupu-kupu dapat dijadikan contoh bagi pendidik (guru tari) maupun seniman lain untuk mengedukasi siswa melalui tari yang mudah, sederhana, menarik, dan menyenangkan.

Kata Kunci: Proses Kreatif, Penciptaan Tari, Tari Kupu-Kupu



# **IDRIS SARDI: HIS EXISTENCE AND DEDICATION TO THE DEVELOPMENT OF MUSIC IN INDONESIA**

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## **Abstract**

Idris Sardi is a very innovative and prolific musician. In 1955, Idris Sardi held musical performances in Europe, the United States, Russia, and Asia. Idris Sardi was a concertmaster at Orkes Studio Djakarta (OSD), he also made music arrangement for orchestra, created violin solo album, and wrote film music illustrations. This article discusses the existence of Idris Sardi as a violinist, concertmaster, conductor, arranger, and composer. His dedication is the pioneer of the performances of regional, national, popular, rock, and children in orchestral music. Idris Sardi was the inventor of a new style in keroncong music, developed the violin technique, and was actively involved in peacekeeping missions through musical performances. This paper emphasizes that the existence and dedication of Idris Sardi can be an inspiration for today's musicians in developing quality of music and easily accepted by the wider community. Reviewed from vocational education, Idris Sardi adopted the andragogy approach, Life-Based Learning (LBL) and Problem-Based Learning (PBL) to develop his musical competence.

Keywords: Idris Sardi, existence, dedication, life-based learning, problem-based learning



# DEVELOPMENT OF EDUCATIONAL GAME LEARNING MEDIA IN PPKN LEARNING TO INCREASE LEARNING MOTIVATION

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## ABSTRACT

This research was conducted to result learning media game education to learning PPKn, to increase students motivation in study in material the Archipelago concept. By need analysis, the first students motivation in SMAN 6 Palembang of the tenth grade with sample 36 students and the result was 41% in category their motivations was low. The method in this research used Hannafin and Peck model with the using of Tessmer evaluation. The validation included master of media, material, and language. The results of validation were media validation was excellent, it was in avarage 4.8 or in level 96%, material validation was excellent, it was in average 4.5 or in level 90%, while language validation was good, it was in average 4.0 or in level 80%. Product Practical assesment was done with phase one-to-one and small group. Product practical on the phase of one to one in category excellent in average practical 37.3 with validation 93.2%. Product practical on the phase of small group in category excellent in average practical 33.8 with phase practical 84.5%. Whereas in the phase of field test research determined potensial efect to increase students' motivation with percentage 83.4% in category excellent. Based on the result of research, conclude that learning media game education in material the Archipelago Concept of Senior High School was excellent in validation, excellent in practical and had potential effect in learning motivation with percentage in category excellent.

Keywords : development, media learning, game education, learning motivation



# ANALISIS FUNGSI, MAKNA DAN NILAI MORAL DALAM UPACARA RITUAL KESENIAN *COWONG*

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## Abstrak

Kesenian *Cowong* merupakan sebuah upacara ritual yang bersifat tradisional yang berasal dari masyarakat agraris Dusun Pagakwungu, Buayan, Kabupaten Kebumen. Kesenian *Cowong* ialah wujud dari aktifitas kolektif masyarakat Pagakwungu yang bersumber pada kepercayaan terhadap alam dan roh leluhur yang dipercaya mempunyai kekuatan magis yang mampu mendatangkan kesejahteraan bagi seluruh masyarakat dusun tersebut. Teknik pengumpulan data dalam penelitian ini dilakukan dengan observasi, wawancara, dan dokumentasi. Hasil penelitian ini ditemukan ada: Bentuk penyajian prosesi ritual *Cowong* terbagi menjadi tiga tahap yaitu persiapan, pelaksanaan, dan penutup. fungsi ritual kesenian *Cowong* di Dukuh Pagakwungu Kecamatan Buayan Kabupaten Kebumen tersebut : (1) Fungsi ritual kesenian *Cowong* sebagai ritual meminta hujan pada saat musim kemarau panjang, (2) Fungsi ritual kesenian *Cowong* sebagai pengobatan bagi warga masyarakat yang meminta bantuan untuk kesembuhan dari penyakitnya, (3) Fungsi ritual kesenian *Cowong* sebagai *slamatan bulan suro* yang dilakukan selama satu tahun sekali. Makna yang terkandung pada kesenian *Cowong* terdapat di *sesajen*. Nilai moral kesenian *Cowong* yaitu hubungan sesama makhluk hidup, hubungan makhluk hidup dengan alam, hubungan makhluk hidup dengan lingkungan.





# PEMANFAATAN TEKNOLOGI ROBOT TERBANG UNTUK PEMBELAJARAN DAN PEMANTAUAN LINGKUNGAN PESANTREN HIDAYATULLAH YOGYAKARTA

Istanto Wahyu Djatmiko

## ABSTRAK

Teknologi membuat robot terbang atau drone sudah banyak diterapkan untuk kebutuhan sipil, terutama di bidang bisnis dan pendidikan. Dalam bidang pendidikan drone digunakan sebagai wahana belajar sistem kendali otomatis, pengolahan citra dan proses pemetaan daerah atau untuk pendokumentasian kegiatan belajar. Kegiatan PPM ini dilaksanakan dengan tujuan memanfaatkan teknologi drone untuk pemantauan lingkungan dan pembelajaran ekstrakurikuler di Pondok Pesantren Hidayatullah Yogyakarta

Pesantren Hidayatullah merupakan pesantren masyarakat yang memiliki konsep yang menyatu dengan lingkungan masyarakat sekitar yang terbuka. Pesantren Hidayatullah menyelenggarakan kegiatan pembelajaran berbasis ilmu agama dan ilmu pengetahuan umum mulai dari jenjang Madrasah Ibtidaiyah (MI), Madrasah Tsanawiyah (MTs), dan Madrasah Aliyah (MA). Siswa (santri) juga dibekali dengan kegiatan belajar *life skill* dengan tujuan untuk melatih ketrampilan dan keahlian santri. Teknologi drone merupakan salah satu teknologi terkini yang perlu dipekenalkan kepada siswa (santri). Sasaran kegiatan PPM ini adalah guru-guru yang menangani kegiatan ekstrakurikuler di bidang Infomasi Teknologi dan Komputer sebanyak 5 orang dan siswa (santri) jenjang MA sebanyak 30 orang. Kegiatan PPM dilaksanakan dalam bentuk *Training of Trainer* (ToT) dalam rangka pemanfaatan drone sebagai pelatih dan operator untuk pemantuan situasi Pondok Pesantren Hidayatullah dan memberikan pelatihan pengoperasian dan perawatan drone dalam rangka kegiatan ekstrakurikuler bagi siswa (santri).

Hasil kegiatan PPM tahap 1 ini dihasilkan unit drone yang telah diujicobakan secara teknis di lapangan, titik koordinat untuk operasi drone di lokasi Ponpes Hidayatullah telah ditentukan sebanyak 10 titik koordinat, dan modul pelatihan pemanfaatan drone untuk pembelajaran dan pemantaun situasi pembelajaran di Ponpes Hidayatullah. Kegiatan tahap 2 dilaksanakan secara langsung melalui tatap muka (luring) dalam bentuk pelatihan ToT bagi guru selama 7 jam dan bagi siswa (santri) selama 7 jam, publikasi ke media massa Kedaulatan Rakyat, Seminar Internasional ICE-Elinvo, dan Video YouTube.



# THE STUDY OF RESEARCH MANAGEMENT STANDARDS AT UNIVERSITAS NEGERI YOGYAKARTA AND UNIVERSITI UTARA MALAYSIA

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Yogyakarta State University

## ABSTRACT

their obligations. Research activities are accommodated by a research institute which regulates the mechanism and design and implementation of research activities. To maintain the quality of the implementation of research activities, research institutions and universities have research management standards. The purpose of this research is to find out: 1) what are the standards of research management at Yogyakarta State University and at Universiti Utara Malaysia, 2) how is the realization of the achievement of research management standards at Yogyakarta State University and at Universiti Utara Malaysia, 3) what are the obstacles in implementation research management standards at Yogyakarta State University and at Universiti Utara Malaysia. This research uses quantitative and qualitative methods with a comparative study between the standards of research management at Yogyakarta State University and at Universiti Utara Malaysia. The focus of the study is regarding university policies regarding research management standards by referring to the Permendikbud on national higher education standards, and quality documents both at Yogyakarta State University and at Universiti Utara Malaysia. Data collection techniques using FGD techniques, questionnaires, documents, observation, and online interviews. The validity and reliability of the questionnaire instrument used expert validation. The validity of the qualitative data was validated using the informant review model and data triangulation. Quantitative data analysis using descriptive analysis techniques and qualitative data with an interactive analysis model. The research management standards between Yogyakarta State University and Universiti Utara Malaysia have almost the same standards covering planning, organizing, implementing, and monitoring and evaluation. Meanwhile, the realization of research management has the same thing as university research institutes under the direct supervision of the Chancellor. Research management is carried out by the head of the institution who is responsible to the chancellor.

Keywords: standards, research management, study



# **EMPOWERMENT OF SMALL AND MEDIUM ENTERPRICES (SME) IN BUGEL VILLAGE THROUGH TECHNOLOGY AND FINANCIAL LITERACY IN THE COVID 19 PANDEMIC ERA**

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## **ABSTRACT**

Lots of SME in Bugel struggled during the covid-19 pandemic. Bugel is one of village in Panjatan, Kulon Progo, Yogyakarta, with a huge potency to be developed. Community service is a program that must be carried out by lecturers to give contribution to the society and support the tridharma of higher education. The purpose of this community service program is to empower SME in Bugel Village which have been affected by the covid pandemic. The programs includes increasing the literacy of technology and finance, through digital marketing training and financial management planning for increasing the productivity of the SMEs in the village.

The activities of the community service includes several stages, starting with observation and survey, discussion with the village apparatus, training and mentoring, practice, and monitoring. The community service is held for 2 month, with about 25 SMEs in 2 field industry: food and beverages and crafts (from water hyacinth plant and ecoprint).

The community service program was well implemented. The programs includes training for digital photography, digital marketing and financial planning from experts. The team also assist/accompany the SMEs during the community service programs, especially in increasing their literacy on technology and financial management. These micro and small enterprices understood the importance of using technology for selling their product through marketplace such as in social media (whatsapp, facebook, instagram), shoppee, tokopedia, etc. We also assist SMEs in financial planning with determining the cost of production, cost of good solds, price of product, transactions recording, and managing financial statement.

Keyword: Community Service, Literacy, Digital Marketing, Financial Management



## PELATIHAN PENGEMBANGAN MODEL-MODEL PEMBELAJARAN ONLINE BAGI GURU SMK NEGERI 1 SEYEGAN PADA ERA PANDEMI COVID 19

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### Abstract

Pandemi Covid-19 yang terjadi di Indonesia merupakan wabah yang memiliki dampak destruktif yang merubah dan mempengaruhi berbagai aspek kehidupan. Begitu pula yang terjadi pada dunia pendidikan vokasional di SMK. Berbagai upaya dilakukan oleh berbagai negara dan berbagai pihak untuk mengatasi dampak pandemi Covid-19 di bidang pendidikan khususnya pembelajaran. Pembelajaran jarak jauh melalui dalam jaringan (daring) menjadi solusi yang diajukan pemerintah. Meskipun demikian masih banyak kendala dalam pembelajaran dengan mengimplementasikan model pembelajaran daring tersebut. Kendala tersebut antara lain yang berkaitan dengan kemampuan guru dalam implementasi pembelajaran daring, kesiapan implementasi pembelajaran daring dimasa pendemi Covid-19, pemilihan model pembelajaran daring yang tepat dan sesuai dengan mata pelajaran kejuruan di SMK. Oleh karena itu perlu dilakukan pelatihan bagi guru-guru SMK dalam merencanakan dan mengimplementasikan model pembelajaran daring yang sesuai dengan karakteristik mata pelajaran dan sesuai dengan kondisi serta situasi di masa pendemi Covid-19. Metode kegiatan yang dilaksanakan adalah pelatihan melalui ceramah, diskusi, pendampingan dan penugasan. Melalui kegiatan ini kami menemukan bahwa model pembelajaran daring yang selama ini telah dipergunakan oleh guru-guru SMKN 1 Seyegan dalam proses pembelajaran di masa pandemi Covid-19 sudah cukup beragam, antara lain penggunaan *google classroom*, *google meet*, *zoom*, WA grup, channel youtube, namun hal ini belum dirasakan optimal hasilnya. Guru juga belum mengenal pembuatan *story board* meskipun sering membuat video pembelajaran untuk menunjang pembelajaran daring. Pelatihan ini menekankan pentingnya penguasaan dan optimalisasi penggunaan *google classroom* dan pembuatan *story board* yang berhasil menambah pemahaman peserta pelatihan.

Kata kunci : pandemi, Covid-19, model, *google classroom*, *story board*



# STUDENT PERSPECTIVE OF THE LIBERATING LEARNING MODEL IMPLEMENTATION TO INCREASE THEIR LEARNING INDEPENDENCE

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## Abstract

This study aimed to find students' perspective on how a Liberating Learning Model implementation impact their independence learning. This research was conducted on two phases. The first phase (2020) found out about their attitudes towards liberating learning. Meanwhile, the second phase (2021) was studied students' perspective of liberating learning model in order to improve their independence in learning. The Liberating Learning Model used in this study was developed using W. Dick & Carey method which had been stated valid and feasible by the experts. It consisted of 10 development steps, namely, identify instructional objectives, conduct instructional analysis, analyze student characteristics and context, formulate specific instructional objectives, develop assessment instruments, develop instructional strategies, develop and select appropriate instructional materials, design and conduct formative evaluation, conduct revisions of learning, and design and conduct summative evaluation. The research population were students of FIP UNY, and the subject were randomly selected. Data was collected online using questionnaires as instrument that developed using the Friedenbergs Method. The data collected from this research were in the form of both quantitative and qualitative data that were analyzed using qualitative descriptive techniques. The quantitative data were used to find the trends. Based on the results of the study, it was found that of student perspectives is 3.97 that included in "agree" category. So, students tended to have a positive perspective on the Liberating Learning Model impact to increase their learning independence. It envisaged that the students inclined to agree that liberating Learning Model can increase their independent in learning.

Keywords: Students' perspective, independence learning, liberating learning model



# THE DEVELOPMENT OF PROBLEM-BASED LEARNING MULTIMEDIA BY USING ECLIPSE ON THE MATERIAL OF STATE INSTITUTIONS IN SENIOR HIGH SCHOOL

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## Abstract

This study aims to produce problem-based learning media by using eclipse on the material of state institutions in Senior High School to increase students learning motivation. The method used in this study is the development method of Hannafi and Pack model with the using of Tessmer evaluation. The validation involves media, material, and language. Media validation is included in the very valid category for media validation with an average of 4.8 with a validity level of 97.5%; material validation has gone through stages of improvement in the guidance process by material experts; while the validation of linguistic was included in the valid category with an average of 4.5 with a validity level of 90%. The practical assessment of the product has done with process one-to-one and small group. The practicality of products at the one-to-one included in the practical category with average practicality of 3.9 and a validity level of 78.3%. The practicality assessment of the product in the small group classified into the practical category with average practicality of 3.8 with a practical level of 76.3%. While in the field test process which determines the potential effect to increase the motivation of learners with a percentage of 87.9% which included very well. Based on the results of the study, it can be concluded that problem-based learning media development used eclipse on the state institutions in the Senior High School to be accurate, practical, and has a potential effect on learning motivation with a percentage that to be a very good category.

Keywords: Multimedia Development, Problem-based Learning, Eclipse, Learning Motivation



# REVITALIZATION OF STRENGTHENING CHARACTER EDUCATION LIMITED FACE TO FACE LEARNING DURING THE COVID-19 PANDEMIC

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## Abstract

The paper aims to describe revitalization of strengthening character education limited face to face learning during the covid-19 pandemic. The study was conducted at SMA Maarif NU Pandaan, Pasuruan Regency, East Java with qualitative approach and descriptive research type. The research subjects were the principal, Deputy principal of curriculum, teacher of religion education, and teacher of Pancasila and Civic Education. Data was extracted using an structured interview, observation and documentation. The result of the study concluded that The revitalization of strengthening character education in limited face-to-face learning during the COVID-19 pandemic partially changed the structure systems, especially those which implementations are limited by space and time. However, this does not reduce the enthusiasm of the school community in demonstrating character education in schools and does not discourage schools from achieving the goals of national education itself. This can be proven by the involvement of all school members to succeed in strengthening character education even though it is hindered by the current conditions.

Keywords: Revitalization, Face to Face Learning, Character Education



# PROSESI TUJUH BULANAN SEBAGAI SYMBOL BUDAYA MASYARAKAT DOMPU NTB (NUSA TENGGARA BARAT).

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## ABSTRAK

Kekayaan budaya yang dimiliki oleh masyarakat suatu daerah terlihat dari tradisi yang dimiliki oleh masyarakatnya. Sebagai sebuah tradisi tujuh bulanan merupakan hasil dari keberagaman budaya yang dimiliki oleh bangsa ini. Tujuh bulanan merupakan salah satu tradisi yang dimiliki oleh masyarakat Dompu yang diwariskan secara turun temurun oleh leluhurnya hingga sampai saat ini terus berkembang dan dilestarikan oleh masyarakat Dompu. Tujuh bulanan merupakan suatu kewajiban untuk ibu hamil yang sedang mengandung anak pertama Metode yang digunakan dalam penelitian ini adalah kualitatif deskripti melalui pendekatan etnografi. Kualitatif merupakan metode pengumpulan data yang bertujuan untuk memahami fenomena apa yang terjadi serta menghasilkan data berupa kata-kata, dokumen atau video yang dihasilkan dari lokasi penelitian kemudian diolah menjadi hasil penelitian. Data-data tersebut didapatkan melalui tahap wawancara, observasi dan dokumentasi (mengambil gambar, video atau merekam terkait prosesi pelaksanaan acara tujuh bulanan menggunakan hp). Sedangkan etnografi adalah sebuah pendekatan yang mengkaji tentang budaya yang dimiliki oleh masyarakat. Karena tujuh bulanan adalah sebuah tradisi yang dimiliki oleh masyarakat Dompu, tentu dalam hal pelaksanaannya mengandung unsur-unsur budaya yang terkait dengan kehidupan masyarakat setempat.

Kata Kunci : Tujuh Bulanan, Tradisi di Dompu NTB





# The Effectiveness of Problem-Based Learning through e-Learning on Students' Critical Thinking Skills during the COVID-19 Pandemic

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## ABSTRACT

The learning process during the pandemic is carried out by e-learning. Thus, an appropriate learning model is needed to improve students' critical thinking skills. This study examines the effect of problem-based learning through e-learning on students' critical thinking skills during the COVID-19 pandemic. This research was conducted at SMA Islam As-Shofa Pekanbaru. This study employed quasi-experimental research with the research subjects of 10<sup>th</sup>-grade students of SMA Islam As-Shofa Pekanbaru. In practice, students were given a pretest and posttest. The research parameters are students' critical thinking skills. Indicators of critical thinking skills are analyzing, synthesizing, recognizing, solving problems, concluding, and evaluating. Data collection on critical thinking skills is pretest and posttest questions. Data were presented and analyzed inferentially. The results of students' critical thinking skills obtained an N-gain index of 0.44 (effective category). Overall, the Problem Based Learning (PBL) learning model through e-learning effectively improves students' critical thinking skills, but in detail from the five indicators, it is less effective for improving evaluation.

Keywords: E-learning, Problem Based Learning, Critical Thinking



# Analisis Evaluasi Kurikulum 2013 Pembelajaran Seni Budaya Di SMA Islam 3 Pakem Sleman Yogyakarta Pada Masa Pandemi Covid-19

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## ABSTRAK

Evaluasi dilakukan sebagai bahan agar dapat mengetahui sejauh mana terlaksananya program Kurikulum 2013 Pembelajaran Seni Budaya di SMA Islam 3 Pakem Sleman Yogyakarta. Tujuan penelitian ini adalah mengidentifikasi dan mendeskripsikan (1) Evaluasi Kurikulum 2013 pada proses belajar mengajar (PBM) pada mata pelajaran Seni Budaya. (2) Hambatan dan keberhasilan pelaksanaan penerapan Kurikulum 2013 mata pelajaran Seni Budaya pada masa pandemi Covid-19 di SMA Islam 3 Pakem Sleman Yogyakarta. Bentuk penelitian ini adalah kualitatif deskriptif yaitu suatu proses penelitian dan pemahaman berdasarkan pada metodologi yang menyelidiki suatu fenomena sosial dan masalah manusia dan berusaha mendeskripsikan suatu gejala, peristiwa maupun kejadian yang sedang terjadi saat sekarang. Sumber data yang digunakan: informan, tempat dan peristiwa dan dokumentasi. Teknik pengumpulan data yang digunakan: observasi, wawancara, dan studi dokumentasi Hasil penelitian ini menunjukkan bahwa pada masa Pandemi Covid-19 terdapat kendala yang dialami pada mata pelajaran Seni Budaya dimana berdasarkan acuan Kompetensi Inti dan Kompetensi Dasar Mata Pelajaran Seni Budaya Tingkat Satuan Pendidikan Sekolah Menengah (SMA) sesuai Kurikulum 2013 yakni mencakup empat kompetensi pembelajaran dan penilaian: (1) kompetensi sikap spiritual, (2) sikap sosial, (3) pengetahuan, dan (4) keterampilan dimana kompetensi tersebut dapat dicapai melalui proses pembelajaran intrakurikuler, kokurikuler, dan/atau ekstrakurikuler, tidak dapat berjalan dengan efektif dan maksimal. Serta terdapat kendala kurang maksimalnya penggunaan media pembelajaran, masih minimnya sumber pembelajaran bagi siswa, dan tidak tuntasnya pemberian materi ajar yang diberikan oleh guru kepada siswa, hal ini dikarenakan keadaan Pandemi Covid-19 yang telah banyak mengubah berbagai aspek kehidupan masyarakat di seluruh dunia termasuk Indonesia, dan khususnya dalam dunia pendidikan agar dapat beradaptasi dan menyesuaikan sebuah kebijakan yang ditetapkan oleh Kementerian Pendidikan dan Kebudayaan (Kemendikbud) bahwa proses belajar mengajar secara konvensional atau tatap muka di tiadakan sementara waktu dan digantikan dengan Pembelajaran Dalam Masa Darurat Coronavirus Disease atau Covid-19. Ditambah lagi tidak semua guru paham dan dapat mengikuti kemajuan Teknologi Informasi (IT) yang terus berkembang pada saat ini, sehingga guru-guru yang kurang paham akan kemajuan Teknologi Informasi (IT) tetap menggunakan cara tradisional untuk melakukan proses pembelajaran, sehingga informasi yang diperoleh sangat lambat dan tidak sejalan dengan kemajuan perkembangan Teknologi Informasi (IT) yang sedang terjadi. Kurikulum hendaknya dapat membuat suatu inovasi baru yang kreatif dan inovatif dalam model pembelajaran secara daring ataupun luring, agar tetap dapat menarik minat serta semangat belajar yang tinggi tidak hanya untuk peserta didik, namun juga bagi seluruh para pendidik.

Keywords: Evaluasi Kurikulum, Hambatan, Pembelajaran Seni Budaya



# ANALYSIS OF STUDENT'S ABILITY IN IDENTIFYING THE INTRINSIC ELEMENTS OF FAIRY TALES

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## Abstract

This study aims to analyze students' ability to identify the intrinsic elements of fairy tales. The research method used is descriptive qualitative, namely by describing every finding in the study related to students' ability to identify the intrinsic elements of fairy tales. The subjects of this study were second grade elementary school students, totaling 30 people from 2 study groups. Based on the results of the study, it was found that students who had a very capable category in terms of determining character elements were 70%. The ability of students in determining the elements of ponokohan is 59% of students who are in the very capable category. There are 69% who are very able to determine the setting, 55% of students who are very able to determine the plot, 41% of students who are very able to determine later, and 57% of students are very able to identify the message contained in fairy tales. The conclusion is that the ability of students of SD Laboratorium UPI Tasikmalaya in identifying the intrinsic elements of fairy tales is included in the very capable category.

Keywords: student ability, identifying elements, fairy tale



# THE MOTIVATION TO STUDY AFFECTING ABILITY TO FINISH OF A WORD PROBLEM PRIMARY STUDENTS

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## Abstract

Research by difficulty students was first understand the content of the served in solving about story. So will become a, on the students hard to change and as a story mathematics. At the count students perform the operation also still experienced difficulty. The purpose of this research was to give a to the students of the motivation to study the ability finish story based local knowledge about mathematics served using language sunda and in learning use game sunda cultured. This study used a quantitative approach with the methods approach the correlation with berganda analisis regression. The research results show that the motivation to study students have had a positive impact significantly on ability to finish about story primary school students a correlation coefficient of 0,436.

Keywords: Motivation, ability to finish of a word problem



## NO TITLE

Setyabudi Indartono

### Abstrak

*Safety Awareness* atau Kesadaran Keselamatan pegawai dalam sebuah perusahaan manufaktur merupakan perhatian utama dalam menjalankan manajemen operasional perusahaan dan menjadi bagian penting dalam manajemen SDM. Hal ini diindikasikan sangat terkait dengan *Knowledge Management* atau Manajemen Pengetahuan yang dimiliki oleh karyawan.

Manajemen Pengetahuan sebagai sistem pertukaran pengetahuan menjadi penting dalam keselamatan kerja, terutama dalam sistem operasional organisasi yang berisiko tinggi, dan pertukaran pengalaman sulit dilakukan. Manajemen Pengetahuan yang merupakan suatu proses dalam mengenali, mentransfer, dan memanfaatkan pengetahuan secara efektif dan efisien di dalam organisasi mendorong perusahaan manufaktur untuk memfasilitasi proses-proses tersebut dalam berbagai fungsi manajemen sumber daya manusia.

Komponen Manajemen Pengetahuan terdiri dari *Knowledge Transfer* atau Transfer Pengetahuan, *Knowledge Coordination* atau Koordinasi Pengetahuan, dan *Knowledge Acceptance* atau Penerimaan Pengetahuan. Penelitian ini bertujuan untuk mengkaji pengaruh Manajemen Pengetahuan terhadap Kesadaran Keselamatan pada perusahaan manufaktur. Hasil studi menunjukkan bahwa hanya *Knowledge Coordination* yang memberikan pengaruh signifikan terhadap *Safety Awareness*.

Hasil penelitian menunjukkan bahwa Knowledge Acceptance secara signifikan memberikan pengaruh pada Safety and Health Awareness Sedangkan Knowledge Transfer dan Knowledge Coordination memberikan pengaruh pada Safety and Health Awareness secara tidak signifikan.

Kata Kunci: Knowledge Management, Safety Awareness



# UTILISING LEISURE TIME AMONG INDONESIAN YOUTH ACROSS THE NATION

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## ABSTRACT

This study aims to map data on the use of Indonesian youth's leisure time in various regions of the country. The youth referred to in this study are students from various universities in the country. From the results of this study, it is obtained an overview of how students as youths use their free time in terms of three criteria, namely gender, regional differences (West, Central, East), and other activities.

This research is a quantitative research with a survey approach. The research sample was determined using the expert formula of Krejcie and Morgan, so that a total sample of 384 students was obtained, but to increase representation, the sample was increased to 1224 students from universities in the western, central, and eastern regions of Indonesia.

Data was collected using a questionnaire distributed through Google Forms to various universities through the network of UNY partners and lecturer partners of research members. Quantitative data were analyzed with descriptive statistics, namely the mean, then analyzed using ANOVA statistics, in order to obtain an overview of the youth's use of leisure time and the dominance of student involvement in various aspects of leisure activities.

The results showed that in terms of regional differences, youth in the West Indonesia region were more involved in leisure activities in the form of educational activities, sports and recreational activities, and community activities. Meanwhile, youth in Eastern Indonesia are more involved in leisure activities in the form of religious activities, family activities, and entrepreneurial activities. Meanwhile, in terms of gender, male youth were found to be more likely to have a high intensity in physical (sports), social (community) and creativity (entrepreneurship) activities, while female youth were more likely to have a higher intensity in non-formal activities. physical (education and religious) and the closest object in life (family). Finally, the use of youth leisure time in Indonesia based on other activities (working vs. not working) shows that youth who work have a higher intensity of activity, both physical (sports, community) and non-physical (education, religion, entrepreneurship), while youth Those who are not working are known to be more involved in family activities than young people who are working.

The results of the study imply that an increase in leisure activities, especially youth participation in the Eastern region in educational activities, is necessary for community activities. Furthermore, universities need to develop facilities and infrastructure that can support youth activities, especially youth in Eastern Indonesia in educational activities outside of class hours as well as facilities and infrastructure to support youth involvement in community activities.

Keywords: Utilization of Leisure Time; Youth Leisure Time; Indonesian youth



## MOOC Improvement Strategies to Enhance Digital Literacy Capabilities

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### ABSTRACT

This study aims to describe the circumstance of academic community MOOC consisting of lecturers and students. It is described descriptively, and literature review is carried out using import literature, classifying resources, code & annotate, query and visualize, and memo. The study shows that the use of MOOC among the community is still very low. Therefore, a strategy is needed to improve digital literacy skills through a strategy to increase MOOC by applying these ways; firstly, analyzing the need to use AI technology on social media and personalizing information, and secondly, developing interactive courses with a component display theory approach. The study results also show that there is a conceptual link between the potential in MOOC and the digital literacy dimension.

Keywords: MOOC, Strategy, Artificial Intelligence, Digital Literacy



# SIPESIA: AN EDUCATIONAL GAME FOR LEARNING HUMAN DIGESTIVE SYSTEM AT JUNIOR HIGH SCHOOLS

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## Abstract

This paper presented an educational game, SIPESIA, a prototype game to support science learning particularly about the human digestion system for junior high school students. The educational game is built in the form of 3D first-person shooter games and aimed to help the student learning the human digestion organs, their function, and the enzyme involved in the human digestion mechanism. The game presented the stunning adventure of a young boy magically exploring the human digestion system, intuitively introduced the human digestion organs and their function, and delivering the learning content as well as a great gameplay experience. The game is designed to be user-friendly and easy to learn without a complex tutorial. To evaluate the quality of the prototype, several scenarios are engaged. First, an expert in educational games is inspecting and evaluating the game, to provide feedback in the graphic, playability, user interface, control, and learning content. The result showed that SIPESIA showed good quality in the display, interactivity, and playability, and was able to deliver the proper learning content. And for the final user test, five junior high school students played the game for the first time and the feedback is collected. The Result indicated that SIPESIA is highly accepted as an educational prototype capable of delivering a high-quality game experience

Keywords: learning content, educational game, playability, user interface





# Implementation of Character Assessment In the Science Learning Process in Junior High School based on School Culture

Suhandoyo, Budiwati, Ciptono, Sudarsono,

## Abstract

Various cases that occur in the community, such as fights and various rule violations involving teenagers, show that character education in schools is less than optimal. Improving the character of students is one of the achievements of competence in science learning. The purpose of learning science in junior high school is to develop the knowledge, skills and attitudes or character of students. However, in the implementation of science learning, the process is more emphasized on increasing knowledge, so that the development of the domain of attitudes and skills does not receive serious attention. This study aims to find information descriptively on the variety and implementation of character assessments carried out in science learning in schools based on school culture in DIY.

This descriptive study was designed using the observation method by distributing questionnaires, online interviews and looking at learning design documents. A total of 30 samples of science subject teachers were used as targets for filling out questionnaires. More in-depth interviews were conducted with 6 science teachers, which were taken from a sample of respondents. The entire series of data collection was carried out online, considering the still large COVID-19 pandemic. The data includes planning, implementation, obstacles, various aspects and methods of character assessment.

The results showed that all science teachers designed character assessments in science learning, there were various obstacles, such as time, effort and number of students, causing a discrepancy between the planning and realization of the designed assessment. A more flexible and efficient character assessment model is needed regarding time and its application.s

Keywords: assessment, character, science learning



# The effect of virtual practicum based on virtual reality to enhance digital literacy and problem-solving skills among junior high school students

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## ABSTRACT

This study aims at analyzing the effect of the Virtual Practicum based on Virtual Reality (VPbVR) to enhance Digital Literacy and problem-solving skills among junior high school students. This type of research can be categorized as Quasi-experimental research with Nonequivalent Control Group Design. The subjects of this study were the seventh-grade students in one of the junior high schools in Sleman Regency, Yogyakarta. The research instrument consisted of pretest and posttest on Digital Literacy and problem-solving skills. The data analysis technique used N-Gain analysis, prerequisite test, hypothesis testing with MANOVA, and effect size. Based on the MANOVA test, the Sig. value of  $0,025 < \alpha (0.05)$  indicated that there was a gap in the students' Digital Literacy and problem-solving skills between the control and the experimental class. The use of VPbVR learning media enhanced the ability of Digital Literacy by 87% for the experimental class and 67% for the control class respectively. Meanwhile, the effective contribution to the use of VPbVR learning media was 78% for the experimental class and 56% for the control class. It means that the use of VPbVR learning media contribute effectively to improving the ability of Digital Literacy and problem-solving.

Keywords: VPbVR, technology literacy, problem-solving



# **Workshop on Preparing Integrated Science Teaching Materials Adapted to Contextual NGSS (Next Generation Science Standards) with Covid-19 to Optimize PCK (Pedagogical Content Knowledge) for Middle School Science Teachers in the 21st Century Technology Era.**

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## **Abstract**

This training activity aims to improve the pedagogic competence and professional competence of junior high school science teachers in Magelang Regency in compiling Integrated Science Teaching Materials Adapted to Contextual NGSS (Next Generation Science Standards) with Covid-19 to Optimize PCK (Pedagogical Content Knowledge) Middle School Science Teachers in the Era of 21st Century Technology.

This activity was attended by 20 science teachers at SMP Magelang Regency. The training activities will be held online on Saturday, 29 May 2021 and Friday, Saturday 4, 5 June 2021 (asynchronous). The material presented on the first day included Integrated Science teaching materials adapted to NGSS (Next Generation Science Standards) which were contextual to Covid-19. Activities on the second day were focused on designing teaching materials for adaptation of NGSS (Next Generation Science Standards). The step of the third day workshop activity consisted of assisting in the preparation of teaching materials asynchronously. The method of training activities consists of lectures, questions and answers and discussions. Activities are carried out through the stages of preparation, implementation and evaluation. The preparation stage is carried out by coordinating with the MGMP IPA SMP Magelang district in determining the time and place of training. The evaluation stage is carried out during the training process and assessment of teaching material products.

Based on the indicators of success, this regional development PPM activity can be carried out quite successfully, as seen from each science teacher in each group actively participating in preparing the Integrated Science Adaptation NGSS (Next Generation Science Standards) teaching materials that are contextual to Covid-19. The science teacher responded to the activities very well and gave suggestions for improvement of the next training.



# PERUBAHAN FISIK DAN KIMIWI TONGKOL JAGUNG DAN JERAMI PADI MELALUI TEKNOLOGI AMONIASI FERMENTASI SEBAGAI BAHAN PAKAN TERNAK RUMINANSIA

Suyanta, Suhandoyo, Hartono, Yuliastono dan Sudarsono

## Abstrak

Pakan merupakan faktor sangat penting dalam menunjang keberhasilan usaha peternakan. Ternak ruminansia sangat bergantung pada pakan hijauan. Di sisi lain, ketersediaan pakan hijauan sangat berfluktuasi, melimpah di musim hujan tetapi minimal pada musim kemarau. Jerami padi, dan tongkol jagung adalah produk pertanian yang memiliki potensi sebagai pakan ternak ruminansia. Penggunaan bahan pakan tersebut sebagai pakan ternak terbatas karena daya cerna yang rendah. Penelitian ini bertujuan untuk melihat perubahan fisik dan kimiawi tongkol jagung dan jerami padi melalui penerapan teknologi amniasi fermentasi.

Penelitian eksperimen ini dilakukan dengan memberikan perlakuan urea dan bakteri pada tongkol jagung dan jerami padi. Perlakuan berupa urea dengan dosis 3 % dan 4 % serta penggunaan bakteri *pseudomonas* dan *lactobacillus*. Lama perlakuan amiasi dan fermentasi yaitu 3, 4 dan 5 minggu. Sebanyak 30 kg bahan tongkol jagung dan jerami padi untuk setiap unit percobaan digunakan dalam penelitian ini. Beberapa indikator kualitas pakan yaitu kandungan protein kasar dan serat kasar akan diukur sebagai indikator kimiawi terpenting, disamping indikator kimia yang lain. Indikatoir fisik seperti bau, tekstur dan penampilan pakan akan diamati secara deskriptif sebagai bahan untuk menilai kualitas bahan pakan ditinjau dari faktor fisik.

Hasil dari penelitian menunjukkan terjadi perubahan fisik tongkol jagung dan jerami padi meliputi warna, bau dan tekstur. Pengamatan akhir penelitian menunjukkan warna bahan menjadi coklat tua, bau asam dan memiliki tekstur yang mudah patah (rapuh). Secara kimiawi, terjadi perubahan yang tidak signifikan pada konsentrasi protein, lemak, serat kasar dan abu.

Kata kunci : tongkol jagung, jerami padi, amoniasi, fermentasi



## HEURISTIC STRATEGY IN BASIC READING COURSE

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### Abstract

The purpose of this study is to describe the effectiveness of implementation heuristic strategy in basic reading course. This study used quantitative descriptive research. The design of the study used is one shot case study. This study was conducted at second semester of English Program Study STKIP Taman Siswa Bima in Academic years 2020/202 and subjects of this study were 22 students. Instrument in this research are the analysis of students final score test and observation checklist in learning interest. The result showed that the application of Heuristic strategy in basic reading course is effective to enhance the students to mastery the course. The minimum score obtained by the students is 70 and the maximum score is 80 with category high, while the learning interest of students showed Focus of attention, feeling, and thoughts on learning because of the interest, show from attitude and enthusiasms of students during teaching learning process is 85,3%, Feeling pleasure in learning which is shown by participation during learning activities 78,3%, and Willingness or tendency of the subject to be actively involved in learning and to get best result in 80,4%.

Keywords: Heuristic Strategy, Basic Reading



# K-POP DANCE GIRLS DAN WANITA REMAJA MUSLIM DI INDONESIA: SEBUAH TINJAUAN AKSIOLOGIS

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## ABSTRAK

Tumbuh kembang *K-Pop Dance Girls* di Indonesia tidak terlepas dari peran para remaja, dan khususnya tidak terkecuali wanita remaja muslim Indonesia yang mengidolakan. Pada hakikatnya remaja wanita muslim di Indonesia menjadikan budaya dan agama sebagai dasar berkehidupan. Namun, kehadiran *K-Pop Dance Girls* pada kenyataannya secara tidak disadari mampu mempengaruhi kepribadian para penggemar. Pengaruh yang dihadirkan berupa gaya hidup dan *korea culture* semakin mendegradasi kebudayaan Indonesia di kalangan remaja. Lebih jauh dari itu, *K-Pop Dance Girls* merupakan bagian dari sebuah program kapitalisasi Korea terhadap Indonesia.

Pandangan untuk memahami makna fenomena *K-Pop Dance* di Indonesia sangat diperlukan sebagai peringatan terhadap kebudayaan Indonesia. Mulai dari perubahan gaya para remaja wanita muslim yang mengimitasi aktor *K-Pop Dance Girls*, hingga penilaian secara aksiologis tentang *K-Pop Dance Girls* menggunakan dasar kebudayaan dan keyakinan di Indonesia. Hasil pengkajian tersebut dapat menjadi pandangan untuk pengambilan berbagai alternatif penyelesaian fenomena *K-Pop Dance Girls* di Indonesia. Tulisan ini berusaha memberikan analisa terkait makna dan dampak dari kehadiran *K-Pop Dance Gilrs* di Indonesia.

Kata kunci: *K-Pop Dance*, wanita, aksiologi



# The Effect of Constructivism-Based STEM on Students' Creative Thinking Skills in Biotechnology Learning

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## Abstract

Fish feed biotechnology is fish pellets produced through the fermentation process of mustard greens, fats, and used cooking oil from waste containing vegetable nutrients. The results of this preliminary research were developed into leaflets and booklets as teaching materials for student learning guides through the constructivism-based STEM approach. This research was conducted at SMP Purnama Pekanbaru from February to April 2020 with a one-group pretest-posttest experimental research design. The research subjects were 25 ninth-grade students who took biotechnology extracurricular activities. The data were collected using the students' creative thinking ability test sheets. Scores and mean scores of data were calculated, tabulated, and analyzed descriptively. The research objective was to analyze the effect of the constructivism-based STEM approach on students' creative thinking skills. The results showed that learning using the constructivism-based STEM approach effectively improved students' creative thinking skills in biotechnology learning in recycling waste into fish pellets.



# The Evaluation Effectiveness of Distance Training by Kirkpatrick Model

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## Abstract

Distance Training (DT) is a training model which was implemented in the Ambon Religious Education and Training Center or Balai Diklat Keagamaan (BDK) Ambon as a resolution of overcoming today's pandemic era. To discover the efficacy of distance training, a training evaluation was carried out. A proper evaluation consists of four level evaluations, namely: level 1 reaction, level 2 learning, level 3 behavior, and level 4 result. The evaluation concerned distance learning which was implemented in BDK by applying level 1 and level 2 of Kirkpatrick model. Research was conducted in Distance Training of MTs Information Technology and Communication Teachers in BDK Ambon. The result proved that in level 1, reaction, DT trainees' contentment was effective as it was shown by the average value of 89.47. It means that trainees felt comfortable and pleased that they were motivated in joining the learning and training. Meanwhile, in level 2, learning, the average value of 82.97 showed to be satisfying. The result was also supported by interviewing of one instructor who took the subject of training. He said that the trainees were quite enthusiastic during the training. Besides that, the trainees adequately comprehended the materials since most of them were young teachers who were technology literate that it could significantly accelerate their cognitive, attitude, and skill competence. Accordingly, distance training of TIK MTs Teachers which was implemented in BDK Ambon proved to be effective. More evaluations on other trainings were necessarily conducted as an institutional reference.

Keywords: Distance Training, Evaluation, Kirkpatrick Model





# “INFLUENCE OF JATHILAN MUSIC ON DANCERS INTRANCE SCENE”

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## **Abstrak**

Jathilan adalah kesenian rakyat paling populer di Daerah Istimewa Yogyakarta, karena adanya adegan ndadi (in trance). Artikel ini merupakan hasil penelitian yang mengungkap pengaruh music Jathilan terhadap proses in trance penari dalam sebuah pertunjukan.

Metode yang digunakan adalah dengan partisipan observer. Penelitian kualitatif deskriptif ini dilakukan dengan mengikuti proses Latihan hingga pementasan Jathilan. Pendekatan ethnomusikologi digunakan untuk mendukung analisis dilengkapi dengan hasil wawancara dengan nara sumber dan pawang Jathilan.

Hasil yang diperoleh adalah 1) Musik jathilan monoton mampu menciptakan suasana hening; 2) kekosongan jiwa penari dipicu karena konsentrasi pada iringan yang menyertai; 3) Adegan ndadi tersaji karena proses alami akibat music yang monoton dan suasana sekitar lokasi yang mendukung.

Kata Kunci : Musik Jathilan, pengaruh, In trance

