



# PROGRAM BOOK

# THE 4<sup>th</sup> ESIC

EDUCATIONAL SCIENCES INTERNATIONAL CONFERENCE

**“TOWARDS A SUSTAINABLE FUTURE OF EDUCATION:  
PREPARING TEACHERS AND PROSPECTIVE TEACHERS  
FOR THE DIGITAL AGE”**

11-13 NOPEMBER 2021

TEACHERS TRAINING & EDUCATION FACULTY OF  
MULAWARMAN UNIVERSITY, INDONESIA

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# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

## Message from the Dean of Teacher Training and Education Faculty, Mulawarman University

The Honorable Rector of Mulawarman University,

The Honorable Invited Keynote Speakers,

Ladies and Gentlemen,

Verily all praise to God the All Compassionate the All Merciful so that the fourth Educational Science International Conference (the 4<sup>th</sup> ESIC) organized by the Faculty of Teacher Training and Education, Mulawarman University, can be carried out as planned.

The Faculty of Teacher Training and Education, Mulawarman University, has been consistent in its commitment for improving the quality of education. One of the efforts that we have made is through our annual international conference, Educational Sciences International Conference or ESIC.

The theme of this 4<sup>th</sup> ESIC is “Toward a sustainable future of education: Preparing teachers and prospective teachers for the digital age”. The digital age is an era where digital technology plays a vital role in human life. Internet, for example, is a main thing supporting the development of the Industry 4.0 as well as the development of the Society 5.0. Therefore, preparing teachers and prospective teachers for the digital age will be essential for education because through education we educate students to be successful in the Industrial Revolution 4.0 as well as the Society 5.0. era. With this theme, the 4<sup>th</sup> ESIC aims to establish scientific communication between academics, researchers, and practitioners as well as the community in the field of education in generating ideas or thoughts to improve the quality of education in this digital age. It is also expected that this conference will be a place of sharing, communicating, and discussing studies, theories, problems, and best practices that creatively, innovatively, and adaptively integrate digital technology in teaching and learning.

Finally, as the Dean of the Faculty of Teacher Training and Education, Mulawarman University, I would like to express my gratitude to all parties, especially the committee who has worked hard to organize this 4<sup>th</sup> ESIC, the invited keynote speakers, all parallel presenters and participants. I wish you all a very fruitful time at the conference.

**Prof. Dr. H. Muh. Amir Masruhim, M.Kes**

The Dean of the Faculty of Teacher Training and Education



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

## Message from the Chairman of ESIC

Assalamu'alaikum wr. wb. Praise and gratitude, let us together extend the presence of Allah, SWT, for His mercy and grace, so that we can meet in the 4th International Educational Sciences International Conference (ESIC 4) with the theme “Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age” by the Faculty of Teacher Training and Education, Mulawarman University on Thursday to Saturday, November 11-13 2021, both in person at the event venue and offline.

May God Almighty always and always provide His protection and grace for the smooth and success of this event, and we hope that this seminar can provide benefits for all participants and of course for the Indonesian nation. This ESIC international seminar activity is an annual agenda of the Mulawarman University FKIP which is expected to have a large and positive impact on seminar participants and contribute to the development of research, especially in the field of education.

The participant speakers in the 4th ESIC come from various regions in Indonesia and abroad as well as from various universities consisting of elements of teaching staff, practitioners, students and the general public. research and experience for all of us.

On this occasion, allow us to express our gratitude to all parties who have supported ESIC activities into 2021. Of course, we also thank the speakers, co-presenters, participants and the entire committee for all forms of participation and support in making this activity a success. We have tried our best in preparing this seminar, but we believe there are still many shortcomings, for that we apologize and we really hope for constructive criticism for the perfection of ESIC activities in the future.

Finally, to all parties involved in this activity, we wish you a happy following and conducting the seminar, may Allah SWT always guide and bless us all, Aamiin YRA.

**Dr. Reza, M.Pd**

Chairman of ESIC 2021



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## CONFERENCE PROGRAM

### The 4<sup>th</sup> Educational Sciences International Conference (4<sup>th</sup> ESIC)

#### HYBRID CONFERENCE (11<sup>th</sup> -13<sup>th</sup> November 2021)

DAY 1: Thursday | 11<sup>th</sup> November 2021

TIME (GMT+8)	ROOM	ACTIVITY
07.30- 08.30	BALLROOM	REGISTRATION
08.30- 08.40	BALLROOM	OPENING BY MC, SINGING NATIONAL ANTHEM (INDONESIA RAYA) AND ANTHEM OF UNIVERSITAS MULAWARMAN
08.40- 08.45	BALLROOM	OPENING PRAYERS H. MAKMUN, M.AG, PH.D.
08.45 - 08.55	BALLROOM	WELCOME REMARKS DR. REZA, M.PD. THE 4 <sup>TH</sup> ESIC CHAIRPERSON
08.55 - 09.05	BALLROOM	WELCOME REMARKS PROF. DR. AMIR MASRUHIM, M.KES. DEAN OF FKIP UNIVERSITAS MULAWARMAN, INDONESIA
09.05 - 09.15	BALLROOM	WELCOME REMARKS AND OFFICIAL OPENING PROF. DR. H. MASJAYA, M.SI. RECTOR OF UNIVERSITAS MULAWARMAN, INDONESIA



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## DAY 1: Thursday | 11<sup>th</sup> November 2021

TIME (GMT+8)	ROOM	ACTIVITY
09.15-09.45	BALLROOM	PHOTO SESSION, ENTERTAINMENT AND COFFEE BREAK
09.45- 10.45	BALLROOM	KEYNOTE SESSION 1 PROF. YOSHISUKE KUMANO, PH.D, SHIZUOKA UNIVERSITY, JAPAN MODERATOR: NURUL FITRIYAH SULAEMAN, PH.D
10.45-11.45	BALLROOM	KEYNOTE SESSION 2 DR. ZULKARNAEN, M.SI. MULAWARMAN UNIVERSITY, INDONESIA MODERATOR: ATIN NURYADIN, PH.D
11.45-14.00	RESTAURANT/ BALLROOM	LUNCH/ ISHOMA
14.00-15.00	BALLROOM	KEYNOTE SESSION 3 DR. HASBI SJAMSIR, M.HUM MULAWARMAN UNIVERSITY, INDONESIA MODERATOR: DR.PHIL. MARIA TEODORA PING, M.SC.
15.00-16.00	BALLROOM	KEYNOTE SESSION 4 DR. IWAN SETIAWAN, M.PD. MULAWARMAN UNIVERSITY, INDONESIA MODERATOR: DR.SC.ED. SAFRUDIANNUR
16.00-17.00	BALLROOM	KEYNOTE SESSION 5 PROF. DR.RER.NAT. BENJAMIN ROTT UNIVERSITY OF COLOGNE, GERMANY MODERATOR: DR.SC.ED. SAFRUDIANNUR
END OF DAY 1 – CLOSING		



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## DAY 2: Friday, 12<sup>th</sup> November 2021

TIME (GMT+8)	ROOM	ACTIVITY
08.30- 09.30	MAIN ZOOM ROOM	KEYNOTE SESSION 1 PROF. DR. STEPHEN HALL SUNWAY UNIVERSITY, MALAYSIA MODERATOR: DR. YUNI UTAMI ASIH, M.PD.
09.30- 10.30	MAIN ZOOM ROOM	KEYNOTE SESSION 2 PROF. DR. A. HARDOKO, M.PD MULAWARMAN UNIVERSITY MODERATOR: DR. YUNI UTAMI ASIH, M.PD.
10.30-13.30		FRIDAY PRAYER AND LUNCH BREAK
13.30- 14.30	BREAKOUT ROOM (1,2,3,4,5) PIC:	PARALLEL PRESENTATION SESSION 1
14.35-15.35	BREAKOUT ROOM (1,2,3,4,5) PIC:	PARALLEL PRESENTATION SESSION 2
END OF DAY 2- CLOSING		



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## DAY 3: Saturday | 13<sup>rd</sup> November 2021

TIME (GMT+8)	ROOM	ACTIVITY
08.30- 09.30	MAIN ZOOM ROOM	KEYNOTE SESSION 1 PROF. DR. KATHY TRUNDLE UTAH STATE UNIVERSITY, USA MODERATOR: DR.PHIL. MARIA TEODORA PING, M.SC.
09.35- 10.35	BREAKOUT ROOM (1,2,3,4,5) PIC:	PARALLEL PRESENTATION SESSION 1
10.35-11.35	BREAKOUT ROOM (1,2,3,4,5) PIC:	PARALLEL PRESENTATION SESSION 2
11.35- 13.00		LUNCH BREAK
13.05-14.05	BREAKOUT ROOM (1,2,3,4,5) PIC:	PARALLEL PRESENTATION SESSION 3
14.05-14.30	MAIN ZOOM ROOM	CLOSING



# The 4<sup>th</sup> Educational Science International Conference

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## Invited Speakers



## **Preparing (Prospective) Teachers For The Digital Age - Challenges And Possibilities For Teaching Mathematics**

Prof. Dr. Benjamin Rott  
Universität zu Köln, Jerman

### **Abstract**

The challenges of our time are manifold, as can for example be seen in the "global goals for sustainable development" which address, amongst others, climate change, poverty, gender equality, and well-being ([www.globalgoals.org](http://www.globalgoals.org)). Preparing future generations for those challenges should be part of education in general and mathematics education in specific as mathematics is essential in many fields, including natural and social sciences, engineering, medicine, and finance. At the same time, we live in the so-called information age, offering us near infinite possibilities. Everyone has unmanageable amounts of knowledge readily available at the tips of their fingers with every device that can connect to the internet. This creates additional challenges for teaching and learning mathematics. Memorizing formulas becomes less important; in turn, selecting appropriate information and evaluating it is becoming increasingly relevant. The availability of digital tools might drastically transform learning settings. We will discuss the impact of these challenges on the future of teaching and learning mathematics and what competencies (prospective) teachers need to live up to the expectations that are placed on them.



## **STEAM: Creatively Integrating the Arts into STEM Education**

**Professor Dr. Kathy Cabe Trundle**  
Science Education, Utah State University, USA

### **Abstract**

One way to enhance students' natural propensity for wonder and interest in science is to integrate arts into science learning. Combining arts with science builds on students' interests in nature while allowing them the joy and pleasure of artistic expression. The idea of integrating arts into academic curricula began with Dewey's progressive views on the importance of aesthetics and was reexamined in the 1960s and 1970s when educators were interested in the meaning students took from their curricula (Bresler, 1995). Since then, researchers continued to study arts integration. With a more recent focus on STEM education, some educators have advocated for broadening STEM to include the arts with STEAM education. The term STEAM was introduced by Georgette Yakman, who realized that, "We live in a world where you can't understand science without technology, which couches most of if its research and development in engineering, which you can't create without an understanding of the arts and mathematics" (Yakman, 2012, p.15). The ability of arts to inspire creativity in scientific thinking, educate learners in a holistic manner, and offer another pathway for making and communicating meaning are important reasons for integrating the arts into STEM learning. Although educators often discuss integrating the arts into science and STEM education, empirical support is relatively recent (Green, Trundle, & Shaheen, 2018). This presentation focuses on how the arts can be integrated into STEM teaching and the efficacy of arts integration for science and STEM learning. This talk includes findings from an study of arts integration within an innovative and integrated Science, Technology, Engineering, Arts, and Mathematics (STEAM) curriculum (Saçkes, Trundle, & Shaheen, 2019).





## Status Study on the Japanese Pre-service Secondary Science & STEAM/STEM Teachers and Those Relations to New Movement of "Society 5.0"

**Prof. Yoshisuke Kumano, Ph.D**

Shizuoka University, Japan

### **Abstract**

It is highly interesting to compare the secondary science and STEAM/STEM teacher employment system among Asian countries and with European countries. For about three decades, it has been highly too difficult to be a science teacher in Japan and at a same time there has been so many people who wanted to be a science teacher in Japan. There has been several factors which needed to consider. There has been several variables that needed to be considered; (1) Population structure of the prefecture or big cities or whole of Japan; historical population changes. (2) Changes of Educational Policy as a nation. (3) Changes of Educational Policy as a local prefecture or big cities. Every seven to ten years our National Curriculum Standards so called "Gakushu Shido Yoryou" have been revised. July, 2018, the new Course of Study of Science for elementary schools were developed to the public of Japan. This time, in terms of all subject, 21st century skills or competencies were introduced and they are namely; Agent learning with intrinsic motivation, learning with deeper communication, and deep learning. There are minor changes in terms of contents of science, however, there are strong changes on science lessons with inquiry based learning, project based learning or problem based learning. About 40 models schools were conducted educational trials in terms of new challenges. In science education, programing or coding learning are introduced. 2018, all of the Ministries started to mention about the importance of so-called "Society 5.0" and science and technology revolution with AI, I o E, or big data. Many governmental policies are developing towards to original science and technological innovation from Japan. Then the Super Science High Schools are continuously selecting. Now we have more than 200 high schools are getting special for educating high quality students who can conduct scientific and technological researches for more than 10 years. From 2017, these movements came down to middle schools. We have around 30 governmental universities that are conducting special scientific or technological education for middle schools. Also, more than 100 researchers are conducting STEM/STEAM education related researches with Japanese NSF which is so-called JSPS.



## **Positioning, Presence and Pedagogy: Personal Reflections on Learning in the Pandemic**

**Professor Stephen J Hall**

Sunway University and Dean, Malaysia

The pushed change of moving teaching and learning online has challenged us all, with little choice but to embrace online learning. Some see this as a deficit, a loss of the face to face learning, which is known and comfortable. Yet the flip side can be positive change, as we have to rework how we teach and learn. Teachers and learners are involved in this adjustment together. It will be suggested that education will never be the same. The presentation will argue that it is time for a repositioning of the role of the teacher, to ensure the presence of engaged and active learners, many of whom are active netizens. Teaching and learning techniques which draw on tried and tested principles and practice will relate to educators' and students' needs in this time of global challenges.

## 4c: The Steps Of “Hots” And The Basic Of Learning Context “Tpack” For The Students On The 21<sup>st</sup> Learning

Aloysius Hardoko  
Fransiskus Hendy Tri Harsanto

### Abstract

Problems related to educational programs in the learning process to involve brain for information and just like when we perform concept, problem solving, analyzing, and participation to make decision. Thinking is a higher cognitive function and thinking process analysis as a part of cognitive psychology. The main goals of this article is how the teachers empower technology, learning strategy and learning material. So, if the teachers empower that three components, they could made the students to show 4C. Content is “what to teach”, Pedagogic is “How to teach”. Technology is how using media. So, the students will be able to comprehend faster. The method of this conceptual article is to discuss the references and taking the conclusion as a result of high order thinking skill (HOTs) and Tecnological Paedagogical and Content Knowledge (TPACK). The result of this conceptual study **that** Using content, pedagogic and technology provide best opportunity for effective teaching in the classroom. And technology can change quickly in the effective learning. This model is a moving up from teacher center to student center. 4c is a mental activity in relation with problem sensitivity. The driving factors of HOTs: a) Sensitivity in seeing the environment of learners is aware that it is in a real place. b) Freedom in seeing the environment is able to see problems from all directions. c) Strong commitment to progress and succeed great curiosity desire. d. Optimistic and dare to take risks like challenging tasks. e. Perseverance to practice: broad insight. f. Conducive, non-rigid, and authoritarian environment. This model is an effort from teachers or educators to increase the effectiveness and efficiency of learning, as a learning problem solving strategy and achieve learning goals optimally and provides energy, enlightenment and fosters cooperation, not the shedding of anger, negative opinions, cornering others, judging others by ignoring the feelings of others who tend to be anti-communication. Conclusion of this conceptual article is the success of learning activities depends heavily on the effectiveness of the 4c process (critical thinking, creative thinking, being able to cooperate and communication that occurs) and using TPACK in learning process. Good and effective learning will provide space and opportunities for children to learn more actively and can explore their curiosity through their abilities and potential. Therefore, the strategy of building communication in the teaching-learning process is the main key to the success of the teaching and learning process and the approach between a teacher and learners. Recommendation: HOTs and TPACK give the new innovation of the learning process for students and educators.

Keywords: *4C, HOTs, TPACK, the 21<sup>st</sup> learning.*



## **Curriculum updating: Aligning graduate competencies with future community needs**

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### **Absract**

Alignment between the competencies of prospective teacher graduates and the competencies needed by 21st century society is an absolute thing that must be considered in the curriculum at the faculty of education. Many institutions formulate competencies that are in accordance with the needs of the institution or society. The results of the study indicate that the alignment between the two is quite in line but the competencies are not explicitly stated in the learning objectives and their achievements have not been consistently measured. Updating the curriculum is something that must be done. This article discusses the proposed formula for updating the curriculum, its strategy and implementation in higher education institutions, especially in the faculty of education. The proposals are 1) to reinforce the formulation of graduate learning outcomes related to the competency of prospective teacher graduates that are in line with the competencies needed by 21st century society, 2) to prepare appropriate teaching materials to achieve these competencies, 3) to consistently assess the achievement of these competencies.

**Keywords:** *graduate competence, curriculum, updating, strategy, implementation.*



## **Promoting Early Reading Skills of children aged 5-6 years using loose parts play.**

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### **Abstract**

This research is motivated by children who have the will to read but are still weak in early reading skills. This may be due to a lack of stimulation to the child. The purpose of this study was to improve early reading skills using loose parts play in children aged 5-6 years. This study used 15 children aged 5-6 years as the subject. The object of research focused on improving the early reading skill by using loose parts play. Methods of collecting data used checklist observations, interviews, and documentation. The results showed that the early reading skill of children aged 5-6 were 52.6% at the end of the first cycle while at the end of the second cycle the very well-developed children were 81.3%. This initial improvement in early reading skills can be seen from the child being able to name letters in loose parts play, able to read syllables from loose parts play, and able to read simple words from loose parts play. The conclusion obtained by using loose parts play was that children's early reading skills develop very well. Keywords: Early reading skill, early childhood, loose parts play activities

Keywords: *Early reading skill, early childhood, loose parts play activity*



## Recognizing Context to Cultivate the Pre-service Teachers' Knowledge on the Technology Integration at Teacher Education Program

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### Abstract

Context, later upgraded as Contextual Knowledge (*XK*) in the Technological Pedagogical Content Knowledge (TPACK) Framework is considered imperative to teacher educators to be their basis for doing an act on, changing, and helping pre-service teachers gain the knowledge types for technology integration. This study aims to describe the teacher educators' practices in cultivating pre-service teachers' knowledge for technology integration in technology in a teacher education context. A Qualitative Case Study was implemented by collecting the required data through the series of interviews and the documents of pre-service teachers' reflection notes coded and analyzed thematically. The results show that both the teacher educators agree to apply project-based learning to allow pre-service teachers to learn collaboration skills to share ideas, discuss, and solve problems during video project accomplishment. However, they have a different point of view on the context of learning that leads to the different technological tools assigned for the pre-service teachers to use in creating the project. Regardless of the difference, the pre-service teachers experienced that the process of cultivating knowledge of technology integration in both technology courses could motivate them to use technology for their future teaching. The findings of this study also encourage teacher educators to shift from technology-focused to pedagogy-focused approaches to teaching in technology courses at a teacher education program.

**Keywords:** *Technology Integration, TPACK Framework, Teacher Education Program*



# Educational technology (ETECH)



ETECH-01

## **Development Of High School Geography Learning Devices Based On Spatial Thinking In The City Of Samarinda**

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### **Abstract**

Spatial Thinking is a thinking skill that needs to be possessed and needs to be developed in learning geography, this is because geography is a scientific discipline that examines the phenomenon of the earth's surface (geosphere) with material objects in the form of the lithosphere, atmosphere, hydrosphere biosphere and anthroposphere as well as the formal object in the form of a spatial approach, environment and area complex. As the main component in developing spatial thinking skills in schools, it is necessary to have supportive learning tools. This study aims to develop a spatial thinking-based geography learning tool in terms of validity, practicality, and effectiveness. This study uses a research and development (r & d) approach which is designed using the ADDIE model which consists of analyze, design, develop, implement, evaluate. The test subjects consisted of material experts, linguists, media experts, geography teachers in Samarinda City, and high school students. Data were analyzed using descriptive statistics. The results of the study are in the form of learning tools which include: syllabus, lesson plans, teaching materials, student worksheets, learning media, and assessment instruments that have been validated by experts with very good feasibility. The validity aspect is considered very valid with a score of 0.85, while the practicality aspect is considered very practical with a score of 0.9. Based on this, it can be concluded that the developed learning tools can be used in geography learning activities.

*Keywords: Development, Learning Tools, Spatial Thinking, Geography*





ETECH-01

## Development Of Internet Intelligent Tutoring System To Support Learning

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### Abstract

The Intelligent Tutorial System is one of the generations of computer systems to support improving the teaching and learning process, because ITS (Intellegent Tutoring System) has advantages over conventional teaching by using a one-to-one approach between ITS and students. The learning process in the classroom will not be effective when the level of understanding of students is different. Students need to be given full power in learning and ITS will provide full service in providing teaching to students. The development of this application uses the Waterfall model, namely 1) requirements analysis; 2) system design; 3) implementation; 4) testing; 5) deployments; 6) maintenance. At the requirements analysis stage, field studies, literature studies and relevant research are carried out, then the learning media design system is carried out by making use case diagrams, flowcharts, and storyboards. At the implementation stage it is ready to be given to the user for testing. At the testing stage, blackbox and whitebox testing are used. In blackbox testing by students, while in whitebox it is tested to teachers. The results of feedback and testing on this application are already on GOOD criteria with a percentage of 84%. This application is based on android with the role of teacher, student and admin. The developed application provides complete materials, exercises and video tutorials as well as tokens/keys to unlock further materials. The research has just reached the stage of developing the media, so further research is needed to see the learning outcomes of students after using this media.

Keywords: *Computer-assisted learning, ITS, Waterfall*



ETECH-03

## **Students' Perspectives On Electronic School Books For History In Class X: Case Study In Two Senior High School In Samarinda**

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### **Abstract**

One of the indirect learning strategies is to use the learning module as a source of independent learning. This study aims to offer a solution by designing an interactive history learning module that can be used according to the conditions of history learning in Samarinda. This research is focused on analyzing the needs of the module, including material analysis, analysis of facilities and infrastructure, and analysis of teacher and student abilities. This research was conducted on 84 students from SMAN 10 Samarinda and SMAN 13 Samarinda. Based on the research results, it is known that the use of Electronic School Books is the main guide in teaching history in the classroom. Most of the respondents agreed that the material was quite difficult to understand, so it required several times to repeat the material presented in the book. Based on input from respondents, the interactive learning module is expected to integrate visual, audio, and text elements.

**Keywords:** *history learning module, community culture, tropical rain forest*



ETECH-04

## Development Of Economic Learning Media Based On Video Explainer On Business Entities In The Economy In Class X Social Science 2 MAN 1 Samarinda

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### Abstract

This research is motivated by efforts to attract students' interest in learning and make it easier for students to understand the subject matter. This study aims to develop explainer video-based economic learning media, test the feasibility level of explainer video-based learning media and find out the responses of class X social science 2 MAN 1 Samarinda students to explainer video-based economic learning media. The research method used was research and development, with the DDD-E development model and the research subjects were 34 students of class X social science 2 MAN 1 Samarinda. The instruments used in this study include a feasibility questionnaire assessed by material experts and media experts and a questionnaire on student responses to learning media. The results showed that the feasibility level of learning media based on the assessment of material experts obtained an average score of 4.73 with very good criteria, which means the material used in the media is conveyed in a clear and structured manner that makes it easier for students to understand the material. 4.6 with very good criteria, which means that the media developed is interesting and feasible to use because it has advantages such as animation, images and sound as well as interactive displays that make students interested in learning with explainer video media. Based on the small group trial consisting of 5 students, the percentage of this video was 92% and the results of the large group trial consisting of 34 students obtained a percentage of 86.5%, which means that this explainer video media attracts students' interest in learning.

Keywords: *learning media, explainer video*



ETECH-05

## "Evergreen" Prototype : Android-Based Science Teaching Materials Focused On Environmental Literacy Of Tropical Rainforest

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### Abstract

The need for information technology teaching materials based on Android smartphone is something that we cannot avoid to improving the quality of online science learning, especially in the era of the covid-19 pandemic. The lecture materials in the elementary science basic concept courses are very diverse, one of them is biodiversity, as well as the preservation of natural resources which has been packaged in the theme of Tropical Rainforest, and through this theme, we aim to achieve future prospective elementary school teachers who have environmental literacy. This study initiated a new android-based teaching material, namely "Evergreen": a digital-based teaching material that can be operated on the Android OS as a support for online science learning. This study uses a Research & Development (R&D) research design, However, this paper only limited to the planning stage, consists of concept and design steps. The output of this research is an "Evergreen" android application design. This "Evergreen" app has features including Subject Matter, STEM activities, and evaluation in the form of games. The features contained in the application provided to direct "Evergreen" users to understand the material, engage in STEM activities related to the preservation of Tropical Rainforests, and complete stages of the game to measure the ability to behave well in their daily lives, using their understanding of environmental conditions. "Evergreen" can be used as an Android mobile-app-based teaching material application with a minimum version of Android 6.0 Marshmallow or more to run and all the features tested on the system give the expected results.

Keywords: *Android, Teaching Materials, Science, Environmental Literacy, Tropical Rain Forest.*



ETECH-06

## **Development Of Pharmacological Educational Game Applications About Android-Based Drug And Tropical Disease Symbols**

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### **Abstract**

Tropical diseases are diseases that generally occur in the tropics and subtropics and the Kalimantan region is included in the tropics. The logo for this type of drug is generally found on the packaging of the drug, the drug logo is generally shaped like a circle with green or blue color, a circle with the letter K, a circle with a positive sign, a circle with a leaf image and many other logo shapes. But not everyone knows that various kinds of drugs have special logos that aim to prevent wrong consumption or drug abuse. Referring to Pharmacology Teaching Materials by the Health Human Resources Education Center of the Ministry of Health of the Republic of Indonesia, this study seeks to develop an Android-based game application that can educate about the types of tropical diseases and the classification of drugs based on the logo on the drug packaging. Because it is based on Android, the application developed can be installed on each user's device (mobile learning) to support distance learning during the Covid-19 pandemic. The design of the Android application is carried out with an R&D development model that is applied to class students at school. It is hoped that the results of this research in the future can produce application products that are educational and not only limited to use in the school environment, can be ready to be applied in the wider community in the real environment.

**Keywords:** *Android, Tropical diseases, drug packaging,*



ETECH-07

## Urgency Of Implementing Online-Based Information Services In Increasing Students' Learning Interest

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### Abstract

The change from face-to-face learning to distance learning has resulted in an urgent situation for guidance and counseling teachers to implement online-based information services to students who have low interest in learning problems. Online-based information services are an innovation from guidance and counseling teachers in providing assistance to equip students with knowledge, understanding, and prevention related to problems that occur. The purpose of this study is to determine the urgency of implementing online-based information services in increasing the learning interest of class 10 students. This type of research is descriptive research using a qualitative approach. The main data sources consist of a guidance & counseling teacher, and two students. Data collection techniques in the form of unstructured interviews and documentation. The results of the study show that the implementation of online based information services during the Covid-19 pandemic helped students increase interest in learning as evidenced by the increase in student learning outcomes after being provided with online-based information services by guidance and counseling teachers. The conclusion is that online-based information services are urgent to be implementing in providing assistance services to students.

Keywords: *information services, learning interest, urgency*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

ETECH-08

## Perceptions And Limitations To Video Use Among English Teachers

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### Abstract

The World Health Organization (WHO) announced COVID-19 as the global pandemic in March 2020. Therefore, many countries followed strict protocols to prevent the spread of the virus. Many government implemented social isolation which causes major closure for schools, universities and other educational institutions. This situation forced all levels of educational institutions to operate remotely and started to implement distance learning. The epidemic situation has brought unprecedented challenges to teaching, learning, education management, and teaching effectiveness, etc. Most of teachers have multiple roles from teaching to online teaching organizers and administrators. In response to this condition, teachers have to make a quick shift to improve their ICT skills, teaching pedagogies, curriculum and assessment. This study explored the theory and teachers perception on the use of video in the educational context. Several limitations in integrating video into teaching and learning were also discussed in this paper.

Keywords: *Video, Language Teaching, Video Selection*



ETECH-09

## The Teachers' Level Of Use Of E-Learning Implementation By Using Concept Based Adoption Model (CBAM) Framework

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### Abstract

The purposes of this study were to find the teachers' level of use in implementation e-learning in teaching English through Concern Based Adoption Model (CBAM). The design of this study was a qualitative case study that aimed to interpret the phenomenon that happened about the teachers' level of use in implementing e-learning in teaching English through CBAM. To fulfil the purpose of the study, data was collected using a method, a levels of use (LoU) focused an interview. Results from the data collection exercise were analyzed and categorized using the LoU behavioural categories and decision points. The researcher found that two teachers were experiencing "routine use" in implementing e-learning in teaching English. According to those processes they faced three factors in implementing e-learning; have not made any changes; and a lack of external collaboration with other teachers using the Programme. The problems faced by teachers in implementing e-learning in teaching English (the students are not with a proper gadget, poor network connection, and do not have internet quota to cover the progressive online class needs). A thorough understanding of LoU can aid the change process and enable change to measure the extent of implementation within the school so that suitable interventions can be created to facilitate sustained and widespread integrated use of E-Learning by teachers.

**Keywords:** *LoU, Concerns Based Adoption Model (CBAM), Implementing E-learning*





ETECH-10

## **Effectiveness of Network Learning Through Google Meet in Class XII RPL at SMKN 2 Banjarmasin**

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### **Abstract**

Various obstacles currently faced by student when doing learning environmental conditions of students that are less supportive both from the network environment and less stable so that learning in the network greatly affects the level of effectiveness of student learning. This study aims to examine the level of effectiveness of learning to the Covid-19 pandemic. This study shows that the implementation of online learning are flexible learning times, students do not always depend on teacher and can train students self-confidence. Meanwhile the lack of learning in the network is that teachers cannot interact directly with students so that teacher cannot know the level of student abilities, besides that the network and student quotas are inadequate. Suggestions from researchers that need to improved are to increase the creativity of teachers when they want to do learning such as learning media that must be more creative and innovative to attract students learning attention and then provide motivational support such as providing added value to spur students enthusiasm for learning.

**Keywords:** *network learning, google meet*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

ETECH-11

## Design of Comic Learning Media Based on Yupa Inscription Sources

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### Abstract

This study aims to create a comic design as a learning medium based on Yupa inscription. This research is the initial stage of the four stages in the 4D Model. Based on the results of the study, it was concluded that the material used in the development of comics in accordance with the history curriculum at the high school level was the material for Hindu-Buddhist Culture in the Archipelago. The analysis of students will be addressed to class X students according to the material presented. The time for using comics is in the odd semester in the middle of the semester. The learning objectives set were to analyze people's lives during the Hindu-Buddhist period based on inscriptions.

*Keywords: comic, Yupa inscription, history learning*



# Alternative education (ALED)



## **The Effect Of Regional Original Income And Balanced Funds On Regional Expenditures In East Kalimantan Province**

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### **Abstract**

Government with openness has become a demand in Indonesia. This has led to a growing demand for transparency and accountability. These two aspects become very important in government management, including in the field of regional financial management and regional financial management, this itself cannot be separated from the name Regional Original Income, Balancing Funds and Regional Expenditures. This study aims to determine the effect of Regional Original Income and Balancing Funds on Regional Expenditures in East Kalimantan Province. Data collection is carried out at the Central Statistics Agency of East Kalimantan Province in the form of a APBD realization report for 15 periods, namely the 2005-2019 fiscal year. Based on The results of the t test show that the two independent variables are smaller than the significance level, therefore there is a partial and significant effect between Regional Original Income and Balancing Funds on Regional Expenditures in East Kalimantan Province. Based on the results of the f test, the sig value is  $0.000 < 0.05$  and the calculated F value =  $37.413 > F \text{ table} = 3.89$ , it can be concluded that the Regional Original Revenue and Balancing Fund have a simultaneous and significant effect on regional spending in East Kalimantan Province.

**Keywords:** *Regional Original Revenue, Balance Fund, Regional Expenditure*



## Impact Of Quality Product And Quality Service Of Customer Satisfaction At Vinz Ice Cream Cafe in Samarinda City

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### Abstract

This study aims to determine the effect of product quality and service quality on consumer satisfaction at Café Vinz Ice Cream in Samarinda City and to determine the level of significance of the influence of product quality and service quality on consumer satisfaction at Café Vinz Ice Cream in Samarinda City. This type of research is correlational with a quantitative approach. The population of this study were all consumers of Café Vinz Ice Cream with a predetermined sample of 96 respondents at Café Vinz Ice Cream. The data analysis technique in this study used multiple regression analysis, and using data collection obtained by distributing questionnaires to 96 respondents and interviews with 5 Café Vinz Ice Cream in Samarinda city to find out the responses given regarding product quality, service quality and customer satisfaction. The results showed that the results of the t-test obtained  $t_{count} = 5.693 > t_{table} = 1.661$  and a significant value of  $0.000 < 0.05$  then there was a partial and significant effect between product quality on consumer satisfaction, then obtained the value of  $t_{count} = 3.824 > t_{table} = 1.661$  and the value of significant  $0.000 < 0.05$  then there is a partial and significant effect between service quality on customer satisfaction. Based on the results of the f test,  $f_{count} = 102.448 > f_{table} = 3.09$  with a significance level of  $0.000 < 0.05$ , it can be concluded that product quality and service quality simultaneously have a significant effect on consumer satisfaction variables. The results of the analysis using the coefficient of determination obtained a value of 0.688, which means that product quality and service quality have an effect of 68.8% on consumer satisfaction. While the remaining 31.2% is influenced by other variables not examined in this study.

**Keywords:** *Quality Product, Quality Service, and Consumer Satisfaction.*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

ALED-03

## Development Of Mathematics Problems Using East Kalimantan Context

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### Abstract

Solving math problems using context is a way that can be done to help use math skills in everyday life. In addition, problems using context will make it easier for students to put mathematics into context so that it will help students use literacy skills in answering questions, and can challenge students' mathematical thinking. This research method is a design research type of development study. The subjects in this study were grade IX students of SMPN 14 Palaran and SMPIT Fastabiqul Khairat Samarinda with a maximum age of 15 years. In this study, it produced 5 math problems using a valid and practical local context and had a potential effect on students' mathematical literacy skills.

Keywords: *mathematics problem, Kamimantan context, literacy*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

ALED-04

## Creating Local Wisdom-Based Educational Videos for Secondary School Teachers in East Kutai

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### Abstract

Video as one of the teaching and learning media has become a most important tool used by teachers in online learning during the Covid19 Pandemic. However, most of the videos are not based on local contexts so that the students are not encouraged to internalize their own local contents. This study aims to provide teachers with practical skills training on how to create educational videos based on the local wisdom. The training was conducted both online and offline and it last for 30 hours with 15 participants from the English teachers of secondary schools in East Kutai. The results showed that the participants were able to create educational videos using different applications but they still find it difficult to integrate it with local wisdom contents.

Keywords: *Educational Videos, Local Wisdom*



# Comparative education (COMPED)





COMPED-01

## **Pre-Service Teachers' Beliefs About Mathematics Teaching And Learning: The Comparison Between Indonesia And Germany**

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### **Abstract**

Several studies have explored pre-service teachers' beliefs about the way to teach mathematics in classrooms. However, very few of the studies consider the effect of contexts on pre-service teachers' beliefs. This present study aims to investigate whether contexts related to students' achievements influence pre-service teachers' beliefs about teaching mathematics, especially teaching about the area of a trapezoid. The participants were 650 pre-service teachers from five universities in Indonesia and one university in Germany. The results indicate that contexts related to students' achievements on pre-service teachers' beliefs. The results show that pre-service teachers both from Indonesian and German universities significantly hold different beliefs about mathematics teaching and learning in different contexts of students' achievements (operationalized as high-achieving classes vs. low-achieving classes). For example, unsurprisingly, most Indonesian as well as German pre-service teachers consider that using problem solving in teaching the area of a trapezoid is only appropriate for high-achieving classes and apparently not appropriate for low-achieving classes. However, unlike Indonesian pre-service teachers who consider the importance of giving explanations and students' understanding from the explanations for both high-achieving and low-achieving classes, German pre-service teachers seem to consider that those in teaching the area of a trapezoid are only appropriate for high-achieving classes but not for low-achieving classes.

**Keywords:** *pre-service teachers; beliefs; mathematics; teaching and learning; contexts; students' achievements*



COMPED-02

## **Paser Indigenous Institution (2000-2020)**

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### **Abstract**

This study aims to explain the historical background of the Paser Traditional Institute (2000-2020). As well as the function, role and impact of the Paser Customary Institution. The type of research used in this research is historical research. The method used is the historical method with stages, namely Heuristics, Criticism, Interpretation and Historiography. The focus of the research discusses the history of the Paser Traditional Institute from its inception to the present. The results of the study indicate that the Paser Traditional Institute is a traditional institution that was established on March 26, 2000 in Lempesu Village, Paser Belengkong District, Paser Regency, the founder of the Paser Traditional Institute totaled 19 people. This Paser traditional institution was established due to the lack of awareness of the Paser community to preserve the traditional culture in Paser Regency, causing public unrest about culture and customs. At the beginning of the founding of the Paser Traditional Institute, they were looking for the chairman of the Paser Traditional Institute who truly understood and could protect every community in Paser. The Paser Traditional Institute has undergone several leadership changes. Obstacles faced with the Paser Traditional Institute regard funding issues, lack of awareness and concern for Paser youth to preserve cultural values and customs, lack of figures who clearly know the history of Paser.

Keywords: *Paser Indigenous Institution*



COMPED-03

## **Analysis of the calculation of cost of production in the semoga laris tofu business, the chinese tofu business mrs. Feby and the sumedang tofu business**

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### **Abstract**

This study aims to determine the differences in the calculation of the cost of production carried out by the Semoga Laris Tofu Business, Ibu Feby's Chinese Tofu Business and the Sumedang Tofu Business. This study uses quantitative descriptive analysis techniques while the data collection techniques used are interviews, observation and documentation. The data analysis technique used is the Calculation of Cost of Production Analysis to produce one type of goods. Based on the results of the analysis, the calculation results of the cost of production at the Tofu Business are selling out Rp.8,587, the calculation of the cost of production at the Chinese Tofu Business, Mrs. Feby, is Rp.18,149 and the calculation of the cost of production at the Sumedang Tofu Business is Rp.10,950, where the selling price of the Tofu Business is Good. The selling price is Rp.10,000/kg, the selling price of Ibu Feby's Chinese Tofu Business is Rp.20,000/Kg and the selling price of Sumedang Tofu Business is Rp.24,000/kg. The results showed the calculation of the cost of production produced one type of goods when compared to the cost of goods manufactured used by the Semoga Laris Tofu Business, Ibu Feby's Chinese Tofu Business and the Sumedang Tofu Business gave different results, which was greater using the cost of production method producing one types of goods. This is because the calculations carried out by the Semoga Laris Tofu Business, the Chinese Tofu Business Mrs. Feby and the Sumedang Tofu Business have not been right in charging factory overhead costs.

**Keywords :** *Differences in the Calculation of Cost of Production.*



COMPED-04

## **The Relationship Between Emotional Intelligence And Student Achievement In Social Studies Subject Class IX SMP Negeri 10 Samarinda Academic Year 2021/2022**

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### **Abstract**

The purpose of this study was to determine the level of emotional intelligence and the level of student achievement, as well as to determine whether there is a significant relationship between emotional intelligence and student achievement in social studies subject class IX SMP Negeri 10 Samarinda in the academic year 2021/2022. In taking the sample, this study took 78 students from 326 grade IX students of SMP Negeri 10 Samarinda. The type of research used is quantitative research with a correlational approach. In an effort to collect data (research instruments), the author uses a Likert scale, namely the emotional intelligence scale which refers to the 5 (five) elements of emotional intelligence and documentation of student report cards to determine the value of learning achievement. Testing the validity of items and elements on the emotional intelligence scale was carried out by expert validation. To find the correlation between the two research variables, Pearson's Product Moment correlation was used and the analysis used the computer-assisted SPSS 23 for Windows program. Based on the results of the study, it showed that there was a significant relationship between emotional intelligence and student achievement in class IX of SMP Negeri 10 Samarinda. From the results of the calculation analysis, the value of sig = 0.000 and rcount = 0.407 means that the value of sig  $0.000 < 0.05$  and rcount is consulted with the rtable of product moment known to be at a significant level of  $5\% = 0.222$ , which means the value of rcount =  $0.407 > rtable = 0.222$ . Thus the null hypothesis ( $H_0$ ) is rejected and the alternative hypothesis ( $H_a$ ) is accepted.

**Keywords:** *Emotional Intelligence, Learning Achievement, Social Studies Lessons*



# Curriculum and Instruction (CI)



CI-01

## **Elaboration Of The Ability To Make Science Literacy Instruments For Junior High School IPA Teachers In East Kalimantan**

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### **Abstract**

The ability of junior high school teachers to make scientific literacy instruments is very necessary. This research is focused on finding out how teachers can elaborate their ability to make scientific literacy instruments. There are eight indicators related to scientific literacy in the developed instrument. from 10 regencies/cities in east kalimantan, 40 junior high schools were taken as the research sample whose instruments were analyzed. based on the analysis, it was found that there were indicators that had not been achieved because curriculum material were not available in that semester. This study shows that the ability of teachers to develop scientific literacy instruments has an average ability of 73 % of all scientific literacy indicators.

**Keywords:** *ability elaboration, instrument, scientific literacy*



CI-02

## **The Identification Of Indigenous Knowledge In Kutai Kartanegara As Social Studies Learning Resource Based On Green Economy**

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### **Abstract**

The research aimed to identify the forms indigenous knowledge and the use of indigenous knowledge in kutai as a learning resource-based IPS green economy. the study was conducted using qualitative descriptive data analysis. the object of the research is to find junior high social studies teacher in kutai who teach as many as 10 people. collecting data using triangulation techniques which combine several research techniques together, namely : a) observation field, (b) documentation, (c) unstructured interviews, (d) literature and (e) focus group discussion (FGD). the result showed kutai kartanegara had various forms of indigenous knowledge which influenced their culture and were relevant to the concept of the green economy. forms of knowledge can be grouped into : 1) religion and beliefs, (2) knowledge system, (3) livelihood systems, (4) attitudes, (5) traditional technology, and (6) arts. the utilization of indigenous knowledge through social studies learning with a contextual approach has a important role in the implementation of the green economy concept

**Keywords:** *Indigenous Knowledge, Learning Resources, Social Studies, Green Economy*



CI-03

## **Influence Of Stem Integrated Project Based Learning Model Online On Students' Creative Thinking Skills**

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### **Abstract**

One of the goals of 21st century learners is being able to think creatively through a high level of thinking skills. In fact, the content of science learning in elementary school is still dominated by discourse, discussions and the provision of question training. This condition causes students to be unfamiliar to produce creative ideas or ideas or produce a product triggered through challenging problems. This research aims to find out the influence of online STEM Integrated Project Based Learning models on Science subjects on students' creative thinking skills. his research was conducted at SD Negeri 014 Sambutan in July to August 2021. The method used is an experimental method with a quantitative approach. The research sample was a grade IV elementary school student with two sample classes namely class IV A as a control class of 25 students and class IV B as an experimental class of 26 students. Data analysis uses the t-test formula, the Independent Sample t Test to determine the creative thinking skills of grade IV students. The results showed the average score of the experimental class was greater than that of the control classes of 76 and 61.20. Next the t test obtained exceeds the table t. So it can be concluded that there is an influence of the project based learning model integrated STEM online on Science subjects on the creative thinking skills of students of grade IV SDN 014 Sambutan.

**Keywords:** *Project Based Learning Model, STEM, Creative Thinking Skills*





## **Analysis Of Mathematics Textbook Class VII On Geometry Materials Based On The National Standard Board Of Education**

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### **Abstract**

Learning resources are one of the aspects needed to support the learning process, especially during the Covid-19 pandemic, the closest learning source to students is textbooks. Based on Permendiknas No. 2 of 2008 article 4(1), the textbooks used must meet the suitability for use based on the National Education Standards Agency. This study aims to describe the suitability of class VII mathematics textbooks used by students in Tenggara Seberang District in terms of material aspects, namely material coverage, material accuracy, and skills. This type of research is a document/text study, the method used is the Miles and Huberman model and the validity of the data in this study was carried out by triangulation of sources and agreement percentage. The results showed that the Mathematics textbooks for SMP/MTs Class VII Revised Edition 2017, 2016 and 2014 published by the Center for Curriculum and Bookkeeping, Erlangga1), Erlangga2) in the criteria were very in line with the suitability of indicators  $\geq 19$  indicators out of 24 indicators and the reliability coefficient  $\geq 0.91$ , and the Mathematics Assessment Book for SMP/MTs Class VII published by Erlangga according to the criteria according to the  $14 \leq$  indicators the suitability of the indicators  $< 19$  of the 24 indicators the reliability coefficient is 0.70. In the sub-aspect of material coverage, the presentation of material in the Class VII SMP/MTs Mathematics books published by Erlangga1) and Erlangga2) and the Class VII SMP/MTs Mathematics Assessment Books published by Erlangga has not used a scientific approach. In the sub-aspects of material accuracy and skills, in the Mathematics Assessment Book for SMP/MTs Class VII published by Erlangga, there are items that are not in accordance with the material presented, and there are no activities that can specifically develop aspects of student skills.

**Keywords:** *Analysis, Material aspects, Mathematics textbooks, Geometry subject matter.*



CI-05

## Analysis Of Questions Based On The Cognitive Dimensions Of The Timss In The Mathematics Textbook For 2013 Curriculum Class VII

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### Abstract

This study aims to analyze and describe the mathematics problem in the seven grade mathematics textbook K-13 based cognitive domain of Trends in International Mathematics and Science Study (TIMSS). Questions analyzed include competency test at the end of the chapter. The basis of this study is Indonesia's achievements in the TIMSS show that students' abilities are low. The type of this study is a descriptive qualitative research. Data collection method used by documentation. Documentation guide is classified in to cognitive domain of TIMSS. Data analysis technique of this research is data reduction, data display, and conclusion drawing/verification. The results of this study shows that overall the questions in in the seven grade mathematics textbook K-13 are not sufficient to train the level of students' thinking development in the cognitive dimension. The proportion of TIMSS cognitive dimensions in this book is uneven. This is indicated by the difference in the proportion of each domain. The domain that dominates the TIMSS cognitive proportion dimension is the domain that applies and knows the domain, and domain reasoning still has a very small proportion. This shows that the questions in the book are still lacking in honing logic and critical thinking skills, as well as reasoning skills that can be used to find solutions to new and unfamiliar problems (non-routine problems). However, this book has provided questions to encourage and encourage students' thinking skills when viewed from the percentage of domain knowledge and domain application.

Keywords: *Dimensi Cognitive, TIMSS, Textbooks*



CI-06

## **The Influence of The Type Cooperative Learning Model on Talking Stick Student Learning Outcomes in Economics Subject Class X Social Science SMAN 1 Rantau Pulung**

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### **Abstract**

This study aims to determine: (1) The use of cooperative learning model type talking stick in economics subjects class X social science SMAN 1 Rantau Pulung; (2) The achievement of economic learning outcomes from the cooperative learning model of the type talking stick in students of class X social science SMAN 1 Rantau Pulung; (3) The Use of cooperative learning model type talking stick effect of the on economic learning outcomes in students of class X social science SMAN 1 Rantau Pulung. This research is a quantitative research type of quasi-experimental research or quasi-experimental, research with research subjects namely students of class X Social Sciences SMA Negeri 1 Rantau Pulung with class X social science 2 as many as 23 people as experimental class and class X social science 3 as many as 26 people as control class. Data collection is done by using the test technique. Based on the results of the descriptive analysis, the average for the experimental class increased by 12.54% while the average value for the control class experienced a slight decrease of 0.44%. Through the results of hypothesis testing, the sig value is obtained. (2-tailed) t-test for Equality of Means is 0.005 so that the significance value is  $<0.05$ , which means that  $H_0$  is rejected or  $H_a$  is accepted. So, it can be concluded that there is a significant effect of the talking stick type cooperative learning model on the economic learning outcomes of class X social studies students at SMA Negeri 1 Rantau Pulung.

**Keywords:** *Cooperative Learning Model, Talking Stick, Economic Learning Outcomes.*



# Distance education (DED)



DED-01

## Student Perceptions On Online Learning During The Covid-19 Pandemic For Social Science Subjects At SMP Negeri 6 Samarinda

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### Abstract

This research is motivated by the learning process that has changed from face-to-face learning in class to online learning during the COVID-19 pandemic. The purpose of this study was to explore student attitudes that were adjusted from several dimensions, namely online learning conditions, teaching materials, student interaction, learning styles and environment/accessibility as well as to determine student perceptions of online learning during the covid-19 pandemic, especially social studies subjects at SMP Negeri 6 Samarinda. The type of research used in this thesis is a case study with a qualitative approach. The data sources in this study were 5 students of class IX and 2 teachers of social studies subjects, with the sampling technique used was purposive sampling technique, while the data collection techniques in this thesis research used interview techniques, questionnaires and documentation. The results of this study indicate that the dimensions of online learning conditions consist of learning tools, namely mobile phones (96.5%), learning applications, namely Google Classroom (85.1%) and online learning constraints, namely difficult internet networks (57%). Judging from the dimensions of the environment/accessibility, the environment is very supportive (72.8%) and from the learning atmosphere, students prefer to return to school face-to-face (71.1%). In addition, it can also be seen from the dimensions of student interaction in the form of semi-two-way interactions (78.1%), the dimensions of learning styles in the form of visual styles (89.5%), and the dimensions of teaching materials carried out during the online learning process are more assignments individual (86.8%). The conclusion of this study shows that there are still many obstacles in the implementation of online learning, and in terms of student attitudes there are still students who are not disciplined when carrying out online learning.

*Keywords: Perception, Online Learning, and the Covid-19 Pandemic*



DED -02

## **Learning Motivation of High School Students in Bontang City in Online Physics Learning during the Covid-19 Pandemic**

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### **Abstract**

This study aims to determine the level of student motivation, determine the percentage of each indicator of learning motivation, determine the significant differences in learning motivation between male and female high school students in online physics learning during the Covid-19 pandemic. The technique used for data collection is by using a questionnaire distributed via google form. The population in this study were all high school students in Bontang with a sample of four SMA in Bontang namely SMAN 1, SMAN 2, SMAN 3, and SMA IT Yabis as many as 137 class XI students, 42 boys and 95 girls. The results showed that: (1) The level of learning motivation of high school students in Bontang using the online system can be categorized as quite good. (2) The percentage of each indicator of learning motivation in online physics learning can be categorized as quite high. Where the first indicator is 77%, the second indicator is 71%, the third indicator is 78%, the fourth indicator is 76%, the fifth indicator is 63% and the sixth indicator is 62%. (3) From the data on the high classification which is the dominance among other categories, men get a score of 64%, while 59% are women.

**Keywords:** *online learning, motivation to learn phys*



DED-03

## The Emotional Geography of Pre-Service Language Teacher In Online Teaching

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### Abstract

This study focused on the emotional geography of the pre-service language teacher during online teaching practicum for EFL students. Researchers used emotional geography framework by Hargreaves (2000) theory. This research aims to find the emotional geography problems that the pre-service language teacher felt during teaching EFL students and to find how pre-service teacher handled the problem. In line with the purpose of this research, researchers used a qualitative research design. The subject for this research was a pre-service language teacher who enrolled in the introduction of the school field (PLP). Researchers used four documents: teachers' diary, lesson plans in PLP's report, teaching, and studying written form. Researchers used content analysis to find the data and used coding steps to code the data especially in teacher's diary. Researchers also used teaching and studying written form. Those written form were able to dig more information about teacher's background and emotional geography questions. Researchers divided the findings of the study into two points. First is the emotional geography problems that pre-service language teacher feels. The second is how the pre-service teacher deals with the problem. Researchers divided each main point of findings into three part: moral geography problem, professional geography problem, and political geography problem. Moral geography was a problem between student's aim and teacher's aim in the teaching and learning process. The professional geography was a problem related to the teacher's professionalism. Political geography was a problem that the teacher felt towards policy in school. In conclusion, this research showed the emotional geography that existed in the online teaching.

**Keywords:** *emotional geography, teachers' emotion, the pre-service language teacher, teaching practicum*



DED-04

## **The Impact Of Information Services Through Whatsapp Group Media In Improving Learning Motivation**

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### **Abstract**

Research purposes knowing the impact of information services through media whatsapp group in boost student Learning Motivation. The type of data used is quantitative research with ex post facto. The population is students class 10 with a sample of 138 respondents. The data analysis technique used descriptive analysis and simple linear regression analysis. The hypothesis, analysis requirements test was conducted and SPSS 25 program. The results of the research from information services had an average of 132, a frequency of 60% with a useful category and learning motivation in the medium category had an average of 195, a frequency of 71%. In the results of t count  $10.253 > t$  table 1.97756, a significance level of 5% means that information services through the Whatsapp Group media have a significant impact on increasing students' learning motivation during the pandemic with an R Square of 44% being in the strong category. This shows that information services through Whatsapp Group can be used as a strategy in increasing students' learning motivation, especially during this pandemic. This research is expected to be used as a reference and reference material to further innovate in providing information services to students' learning motivation.

*Keywords: impact, information services, learning motivation*





DED -05

## **Analysis of Inhibiting Factors for Teachers in Implementing Learning from Home (Offline) During the Covid-19 Pandemic Period at SDN 011 Foreword for the 2020/2021 Learning Year**

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### **Abstract**

This research was motivated by the obstacles faced by teachers at SDN 011 Sambutan in carrying out offline learning from home during the Covid-19 Pandemic. Offline learning at SDN 011 Sambutan is carried out using the door to door method. Offline learning using the door to door method requires a supportive home atmosphere for learning, both in terms of facilities and effective study time, but this has not been achieved at SDN 011 Sambutan. The formulation of the problem in this study is what are the factors that hinder teachers in implementing offline learning from home during the Covid-19 pandemic at SDN 011 Foreword for the 2020/2021 learning year?. This type of research is descriptive-qualitative research that is used to describe what factors hinder teachers from implementing offline learning from home at SDN 011 Sambutan during the Covid-19 pandemic. The research procedure consisted of three stages, pre-field, fieldwork, and data analysis. The subjects in this research were teachers from class I to class VI, totaling 6 teachers. Data collection techniques in this research used questionnaires and interviews to find data related to teacher inhibiting factors and documentation to determine the offline learning process. The data analysis technique uses percentages and qualitative analysis which consists of collecting data, reducing data, presenting data and drawing conclusions. The validity of the data in this research is using triangulation techniques. The results showed that there were complex barriers to offline learning from home during the Covid-19 pandemic at SDN 011 Sambutan in the 2020/2021 academic year. These barriers are influenced by inhibiting factors. As much as 14.33% is influenced by the teacher's competence factor, because the lack of offline learning planning. As much as 23.27% is influenced by the learning process factor, because the lack of learning time allocation. As much as 23% is influenced by student factors, because the difference in the level of intelligence of students. As much as 22.9% is influenced by the lack of infrastructure. While 16.38% is influenced by learning evaluation factors, because evaluations cannot be carried out like evaluations during learning at school. Based on the results of the study, it can be concluded that there are complex obstacles in offline learning at SDN 011 Sambutan due to learning that adapts to the Covid-19 pandemic

*Keywords: Teacher Inhibiting Factors, Learning from Home (Offline), Covid-19*



DED-06

## Student Perceptions On Online Learning During The Covid-19 Pandemic For Social Science Subjects At SMP Negeri 6 Samarinda

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### Abstract

This research is motivated by the learning process that has changed from face-to-face learning in class to online learning during the COVID-19 pandemic. The purpose of this study was to explore student attitudes that were adjusted from several dimensions, namely online learning conditions, teaching materials, student interaction, learning styles and environment/accessibility as well as to determine student perceptions of online learning during the covid-19 pandemic, especially social studies subjects at SMP Negeri 6 Samarinda. The type of research used in this thesis is a case study with a qualitative approach. The data sources in this study were 5 students of class IX and 2 teachers of social studies subjects, with the sampling technique used was purposive sampling technique, while the data collection techniques in this thesis research used interview techniques, questionnaires and documentation. The results of this study indicate that the dimensions of online learning conditions consist of learning tools, namely mobile phones (96.5%), learning applications, namely Google Classroom (85.1%) and online learning constraints, namely difficult internet networks (57%). Judging from the dimensions of the environment/accessibility, the environment is very supportive (72.8%) and from the learning atmosphere, students prefer to return to school face-to-face (71.1%). In addition, it can also be seen from the dimensions of student interaction in the form of semi-two-way interactions (78.1%), the dimensions of learning styles in the form of visual styles (89.5%), and the dimensions of teaching materials carried out during the online learning process are more assignments individual (86.8%). The conclusion of this study shows that there are still many obstacles in the implementation of online learning, and in terms of student attitudes there are still students who are not disciplined when carrying out online learning.

**Keywords:** *Perception, Online Learning, and the Covid-19 Pandemic*



# Early Childhood Education (ECED)



ECED-01

## **An Exploratory Case Study of Early Childhood Education Curriculum Reform in Indonesia: Lessons Learned from Indonesia**

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### **Abstract**

This study explores early childhood education curriculum reform in Indonesia. The research design adopts case study approach aiming to dig extensively about the result of analysis of early childhood education curriculum especially parent involvement in the curriculum development. The data gathering technique employs unstructured interview towards participants, consisting of two teachers and two headmasters representing national and local curriculum school model in Indonesia. This study discovers three important themes in the research data: The role of parents in the early childhood education curriculum, parents as co-collaborators of teachers in developing early childhood curriculum, and the learning material contents in early childhood education curriculum in Indonesia. The implication of this study result emphasizes on the context of parents' role in developing the curriculum of early childhood education as teachers' main partners in the efforts of developing basic competencies such as knowledge, skills, and the attitudes involved in the learning of early childhood in Indonesia.

**Keywords:** *Early Childhood, Curriculum Policy, Curriculum Reform, Curriculum Transformation, Parent Involvement*



## Parenting Skills on Early Childhood Family during COVID-19 Pandemic

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### Abstract

The learning process in PAUD during the pandemic is carried out online through BDR (Belajar Dari Rumah) program. The role of parents in BDR learning is very important for the success of children's learning. The success of parents in assisting the child's learning process is influenced by the parenting skills they have. This study aims to identify parenting skills during the pandemic in the DIY and surrounding areas. The research method used in this research is descriptive quantitative method. The research subjects were parents with early children who live in the DIY and surrounding areas. Subjects consist of 490 parents. Parenting skills scale was developed based on five aspects of parenting skills, namely interaction, empathic communication, application of discipline, problem solving, and psychosocial support. The reliability of the scale is 0.841. Data analysis used SPSS 20 Programme for Windows. The results showed that parenting skills in the low category were 12.6%, medium 72.3%, and high 14.9%. There is no significant difference in parenting skills between fathers and mothers, but if viewed from the level of parent education it can be concluded that the higher the education level of parents, the higher the parenting skills.

*Keywords: Parenting skills, early childhood family, COVID-19 pandemic*



# Education Policy (EDP)



EDP-01

## **Impact Of Coal Proper Assessment And Follow-Up Supporting Sustainable Development At PT. Cahaya energy mandiri**

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### **Abstract**

Development environmental insight is carried out consciously and planned, especially the management of mineral and coal resources to improve the quality of human life. The purpose of the study was to determine the response of PT. Cahaya Energi Mandiri on the impact and follow-up of the PROPER assessment to support sustainable development. This research is a qualitative descriptive study using an empirical legal design. The research location is PT Cahaya Energi Mandiri. The types of data used include primary data, secondary data, and tertiary data. The data technique was used in interviews and literature studies. Data analysis used an interactive analysis model. Research findings are 1) The impact of PROPER assessment is very helpful for companies to always apply environmental care and improve environmental management. Mine reclamation/closure program taking into account the inputs/needs of the community around the mine. 2) Follow-up efforts for the company by complying with government directives, implementing the recommendations of applicable regulations, including when the company experiences problems in following up, the government is always ready, caring, and open to give directions without delay. The PROPER assessment concludes that it is effective and able to increase the compliance of the company's management in maintaining and being responsible for environmental management. Since 2019 the Company has not operated so that in 2021 there will be no visits from PROPER. So that in 2020 the company only won the title of "Red Flag". However, the Company is always committed to complying with the PROPER assessment criteria.

**Keywords:** *environmentally sound development, coal industry, performance appraisal.*



EDP-02

## **Influence Of Headmaster's Leadership Style And Academic Supervision On Teacher Performance In Kunjang River District Junior High School**

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### **Abstrak**

The research aims to find out: (1) the influence of the principal's leadership style on teacher performance; (2) the influence of academic supervision on teacher performance; (3) Influence of the headmaster's leadership style and academic supervision on the performance of State Junior High School teachers in Kunjang River District. The method used in research is a survey with a quantitative approach. The research was conducted at Sungai Kunjang District Junior High School. Population 146 people with a sample of 106 people taken randomly (random sampling). Data collection technique using a questionnaire (Likert Scale). Data analysis techniques use descriptive and inferential statistical analysis (Simple regression, multiple regression, Partial Test, t-test using SPSS program version 21. The results of the analysis can be thitung = 17,235 at the significance of 0.05 obtained ttabel = 1,983, then it can be taken a decision that thitung > ttabel then H0 rejected, the conclusion is that the variable of leadership style affects the teacher's performance variable, 2) obtained thitung = 20,698 on the significance of 0.05 obtained ttabel = 1,983, then a decision can be taken that thitung > ttabel then H0 rejected, the conclusion is that academic supervision variables affect the teacher's performance variables, and 3) obtained thitung = 3,694 in the leadership style variable of and the variable of academic supervision = 7,201 with both variables at significance 0.05 obtained ttabel = 1,983, then a decision can be taken that thitung > ttabel then H0 rejected, In conclusion, leadership style variables and academic supervision variables affect teacher performance variables. In this study can be concluded there is a significant influence of leadership style and academic supervision simultaneously on teacher performance, dimna increasing leadership style and academic supervision, then will increase teacher performance. The result of the correlation coefficient is known that the more influential is academic supervision is very significant compared to leadership styles.

*Keywords: teacher performance, academic supervision, principal role*





EDP-03

## **Implementation Of The Regulation Of The Minister Of PPPA No. 6 Of 2015 Concerning The Role Of The Office Of Women's Empowerment And Child Protection During The Covid-19 Pandemic In Samarinda City**

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### **Abstract**

To create a just society, the government develops programs that have been planned, one of which is to provide protection to women and children as the nation's next generation. During the COVID-19 pandemic, many cases occurred to women and children so that the role of the government was needed. 6 of 2015 concerning the Women's Empowerment and Child Protection System, and more violence in the role. This study uses a qualitative method with a descriptive approach. With resource persons who have the criteria. Using data collection techniques, namely observation, interviews, and documentation as well as data analysis techniques, namely data reduction, data presentation, and drawing conclusions. Based on the results of the study indicate that the implementation of the Minister of PPPA Regulation No. 6 of 2015 concerning the Role of the Office of Women's Empowerment and Child Protection during the COVID-19 Pandemic in Samarinda City has gone well with the existence of the Integrated Service Center for Women's Empowerment and Child Protection (P2TP2A) and has changed since 2019 into an Integrated Implementation Unit for Women's Protection Areas and Children (UPTD PPA) with the issuance of Regulation of the Minister of PPPA No. 4 of 2018. The implementation and role of the Office has been running smoothly through the P2TP2A institution to become UPTD PPA. Suggestions for research that can be done is to propose to the Regional Government to issue a budget for the construction of Safe Houses to provide services.

**Keywords:** *Implementation, Protection*



## Study On Public Perception Of Inclusive Education At SDN 003 Loakulu

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### Abstract

The purpose of the study was to determine the public's perception of inclusive education at SDN 003 Loakulu. This research uses descriptive qualitative research. The research was conducted from August 2021 to September 2021. The research subjects were the community, parents, principals, teachers and students at SDN 003 Loakulu. Data collection techniques using observation, interviews, and documentation. The data analysis technique uses the Miles and Huberman model which in general the concept uses 4 steps, namely data collection, data reduction, data presentation, conclusion drawing/verification. The validity of the data using data triangulation. The results of the study show that the public's perception of the implementation of inclusive education at SDN 003 Loakulu is divided into two views, six out of nine respondents can accept the existence of inclusive education that combines children with disabilities and other children so that they can learn together in class. Because education is a right for every child, including child with a disability, so that they don't have to travel long distances to go to special schools in the city center. However, three out of nine respondents did not agree with the holding of inclusive education because they thought that combining students with disabilities and other students could hinder normal students in their learning and it was considered that students with disabilities should receive education in segresi schools (SLB) because there were already special schools for children with disabilities. From the results of the study, it can also be concluded that the policies implemented at SDN 003 Loakulu in the implementation of inclusive education have not been guided by Ministerial Regulation Number 70 of 2009, and schools have their own policies in several aspects.

**Keywords:** *Perception, Inclusive Education.*



EDP-05

## **Implementation of Academic Supervision Management Based on Gender Differences to Improve the Quality of Learning in SMA, SMK, and SLB**

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### **Abstract**

Academic supervision is the coaching and development of teachers' professional abilities to improve the quality of schools' learning. The task of ensuring the quality of school education is to provide supervision in the form of coaching to teachers in the target schools. The method used in this study is a survey method by collecting information on the implementation of academic supervision management by school supervisors based on gender differences in the SMA, SMK, and SLB education units. Data collection was conducted by using an instrument in the form of data analysis using descriptive analysis. The expected target in this research is to increase insight and knowledge development for Education Management, especially for school supervisors in conducting academic supervision of teachers as an improvement in the quality of the learning process in schools as a basis for making policies to improve educational supervision gender differences.

**Keywords:** *implementation, management, academic supervision, gender differences*



# Educational philosophy (EDPHI)



EDPHI-01

## **Local Wisdom of the Benuaq Dayak Community in Preserving Doyo Weaving in the Moist Tropical Forest Environment of Tanjung Isuy West Kutai Regency**

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### **Abstract**

The research was conducted by collecting ethnographic data through ethical and emic perspectives on the local wisdom of the Benuaq Dayak community in utilizing Doyo leaf fiber as a material for making ikat (weaving Doyo). The method used is qualitative research, using data collection techniques by conducting interviews, observations, and documentation. The data analysis technique uses interactive analysis models. The results showed that; First, the Dayak Benuaq community in Tanjung Isuy, West Kutai Regency, still maintains the local wisdom of Doyo weaving by utilizing forest products in the form of Doyo plants as raw materials. In addition, the craftsmen still use natural dyeing techniques using various types of leaves, bark, and sawdust to make Doyo weaving motifs. Second, Doyo weaving is one of the crafts of the Dayak Continental community which has high economic value. In addition, Doyo weaving also has socio-cultural values that can be seen from the motifs and decorations, as well as their use in certain traditional ceremonies, such as weddings. Third, the effort to preserve Doyo weaving has encountered several obstacles, including, the decreasing number of young people who are interested in becoming Doyo weaving craftsmen as one of the obstacles for the community in preserving Doyo weaving in Tanjung Isuy, West Kutai Regency.

**Keywords:** *Local Wisdom, Doyo Weaving, Tanjung Isuy*



EDPHI-02

## **Analysis Of The Form And Function Of Belian Sentiyu's Speech In The Muara Begai Community Of West Kutai Regency**

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### **Abstract**

Belian sentiyu is a traditional ceremony performed by the Dayak Benuaq people in Muara Begai village, West Kutai Regency, East Kalimantan. The ceremony is related to the belief system and religion adopted by the local community and relates to requests for help to the spirits of spirits around them as well as ancestral spirits and the upper rulers (lahtala) and also the lower rulers (uwokng). This research focuses on the form and function of Belian Sentiyu's speech in the Muara Begai community. The purpose of this research was to describe the form and function of Belian Sentiyu's speech in the Muara Begai community. The research method used is descriptive qualitative research method. The data collection techniques used were observation, interview, recording, documentation, transcription, recording and summarizing, and translation techniques. The data analysis technique used is the analysis technique of Lexy J. Moleong, namely data reduction, data presentation, and drawing conclusions. The results obtained from the form of speech in the form of spell characteristics, namely: (a) a series of rhyming words, (b) verbal, magical or magical, (c) espheric (a special language between the speaker and the interlocutor) and mysterious, (d) use words that are less commonly used in everyday life. The functions of Belian Sentiyu's speech are: (a) as a means of validating cultural institutions and institutions, (b) as a means of educating children, (c) as a means of coercion and control so that the norms of society will always be obeyed by its collective members.

**Keywords:** *Sentiyu Belian Speech, Form, Function.*



EDPHI-03

## **Cultural Values and Function Legend "Batu Mili" Dayak Kayan Folklore in Long Pakaq Village Long Pahangai District Mahakam Ulu Regency.**

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### **Abstract**

Literature is a creative activity, a work of art. Literature is also considered an imaginative, fictitious, and innovative work. At this time the literature of the area was much abandoned. In fact, it should still be preserved as one of the cultural treasures of the region. The purpose of this study is to describe the cultural values contained in the Long Pakaq story, namely cultural values, and the function of public trust in legends. This type of research is qualitative using descriptive methods. Data collection techniques are observation techniques, recordings, interviews, reading techniques and recording techniques. Data analysis technique by analyzing the legend story of Batu Mili. The results of the research found in the legend "BatuMili" namely he cultural value of man's relationship with God which includes believing in God, and praying; (2) the cultural value of human relationship with nature, namely the utilization of natural resources; (3) The cultural value of human relationship with society includes wisdom, deliberation, gotong royong; (4) The cultural value of human relationships with others includes compassion, and loyalty; (5) Cultural values of human relationship with oneself include hard work, and ingenuity; (6) Its function in society is as entertainment, as a means of education, and as a social solidarity raiser; (7) Public beliefs include belief in subtle beings, belief in supernatural powers, and beliefs that are applied as ritual traditions.

Keywords: *Cultural Values, Legends*



EDPHI-04

## **The Role of Business Activities on Waste Management in River and Beach Tourism Area in South Kalimantan**

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### **Abstract**

The attraction of the world of tourism is not only because it is easy to reach and intensive promotion. However, cleanliness is one of its attractiveness factors. Therefore, waste that is not managed properly will have an impact on environmental pollution and affect the cleanliness and comfort of tourist areas. Waste management systems in tourist areas are needed to regulate the management of waste generated around tourist sites. This study aims to: (1) analyze the attitudes and behavior of visitors to river and beach tourism objects in South Kalimantan, (2) analyze the types of waste generated by business actors and visitors to tourism in river and beach tourism areas in South Kalimantan, (3) and analyze the level of participation of tourism business actors in waste management in river and coastal tourist attraction areas in South Kalimantan. This study uses a qualitative approach with the independent interview method. The research subjects are visitors and business actors of river and beach tourism objects in South Kalimantan. The research locations are Hulu Sungai Tengah Regency, Tanah Laut Regency, Tanah Bumbu Regency, and Kotabaru Regency. Collecting data by means of observation, interviews and document studies. The types of organic waste produced are in the form of food waste, raw material waste, paper, cardboard, newspapers, etc. The types of inorganic waste produced are plastic bags, food packaging, plastic and glass bottles, etc. Meanwhile, the types of B3 waste produced include iron, aluminum, glass, medical waste, etc. The results showed that organic waste generated by visitors and beach tourism managers was 14.91%, inorganic waste was 13.49%, and B3 waste was 16.88%. Meanwhile, 18.18% organic natural waste, 20% inorganic waste, and 36.36% B3 waste. Waste generated by business actors was found as much as 28.33% and organic waste as much as 42.7%. For river tourism management waste found piles of organic waste as much as 57.14% and inorganic waste as much as 44.62%. While organic natural waste was found as much as 71.43%. The participation of business actors and managers of river and coastal tourism objects reached 41.18%, participation in the implementation was 73.06% and participation in benefit-taking was 100%. The low participation of business actors and managers of coastal and river tourism objects is because they only listen and accept decisions that have been set in meetings. Lack of knowledge about waste management causes them to have not implemented a good waste management system. They agree that a clean business environment is a special attraction and comfort for visitors.

*Keywords: River and Beach Tours; Participation; Waste handling*





EDPHI-05

## **Processing of Marine Products in Takisung Village as Teaching Materials of Production and Distribution Factors in SMAN 1 Takisung**

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### **Abstract**

This study aims to analyze (1) the description of the activities of the marine product processing production house in the perspective of production and distribution factors and (2) the integration of the marine product processing production house activity in the economics curriculum of SMAN 1 Takisung class X material factors of production and distribution. The research method uses a qualitative approach and the type of qualitative descriptive research. The research subject is the owner of a seafood production house. Data sources are primary and secondary data. Data were collected by observation, interviews, and documentation. The analysis uses the Milles and Huberman model. Based on the results of the study, it was found that (1) the seafood production house used all production factors in the manufacture of salted fish. The production factors used are natural resources such as fish, salt, coastal water and wells as well as sunlight, human resources in the form of labor as a driving factor in the production process, capital in the form of personal capital, entrepreneurship in the form of an entrepreneurial spirit. The distribution factors used are in the form of Products in the form of value and weight of goods, Markets in the form of geographic location and number of orders, Producers in the form of capabilities and services provided, Intermediaries in the form of volume and distribution channels. (2) Factors of production and distribution in marine product processing can be used as local teaching materials at SMAN 1 Takisung class X

**Keywords:** *production, distribution, marine products processing, learning materials.*



EDPHI-06

## **The Effect of Training on The Performance of Employees of PT. Lestari Mitra Sembada (Cinema XXI) Big Mall Samarinda 2021.**

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### **Abstract**

This research was guided by Drs. Kadori Haidar, MM as the first supervisor and Indah Permatasari, SE, MM as the second supervisor . The purpose of this study was to determine employee training, to determine employee performance, and to determine the effect of training on employee performance at PT. Lestari Mitra Sembada (Cinema XXI) Big Mall Samarinda in 2019. This research uses this type of research quantitative while the population in this study were employees totaling 33 respondents. Data collection techniques in this study were observation, interviews, documentation and questionnaires. The data analysis technique used in this research is simple linear regression and coefficient of determination. Based on the results of data analysis, the regression coefficient value on the training variable is 71,334, meaning that every change in the training variable will have a positive effect on employee performance of 0.093, the regression coefficient value is positive indicating a unidirectional effect. This means that if the training variable increases by 1 unit, it will affect the employee performance variable by 0.093. based on the competency test of determination, the value of determination (R) is 0.733. From the output, the coefficient of determination (R) is 0.537, which implies that the effect of training on employee performance is 53.7%. so it can be concluded that the effect of training on employee performance can be stated to have a sufficient influence, while 56.3% is influenced by other variables.

Keywords: *Training, Performance*



EDPHI-07

## **Pesut Mahakam Conservation in Pela Village as a Learning Center for Historical Ecology of Tropical Rain Forests**

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### **Abstract**

This study aims to explain the conservation of the Pesut Mahakam in Pela Village including the development of conservation and protection rules, In-Situ conservation carried out by the RASI institution and the impact of conservation in Pela Village. This study uses a qualitative approach with data collection techniques in the form of interviews and observations. The results showed that the beginning of Pesut Mahakam conservation was due to the aspiration of the governor of DKI Jakarta, Ali Sadikin, to build an Ocean Arena in the Ancol area and inaugurated in 1974 in Jakarta as a means of education and preservation of Indonesia's maritime wealth. However, the ex-situ conservation carried out by the Ancol arena was stopped due to the drastic decline of the Pesut Mahakam population and the enactment of a law that protects the Pesut Mahakam, so that Ex-Situ conservation (out-of-habitat conservation) is no longer allowed in Jakarta. In 2000, an In-Situ Conservation (conservation within the habitat) was formed called the RASI Foundation. This conservation has an impact in the economic, social, political, cultural and educational fields until now for the people of Pela Village.

**Keywords:** *Pesut Mahakam, Pela Village, Historical Ecology, Conservation*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

EDPHI-08

## Salissingan Island Community Life as a Learning Source of Maritime History

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### Abstract

This study focuses on the development of people's lives in Salissingan Island in terms of social, economic and political aspects. This study uses a qualitative approach with data collection techniques through interviews and field observations. The focus of this research is community life and the development of community life on Salissingan Island. The results of this study indicate that the life of the early people on Salissingan Island began during the conflict between the Bajo tribe and the Mandar people around the 19th century. Along with the development of the condition of the population on the Balabalakang islands including Salissingan Island, it began to condense, therefore the thought emerged from the residents to form one village, so in 1994 one village was established. Due to the vastness of the area, in 2008 a second village was formed, the following year the Balabalakang Islands sub-district was formed in 2008. The Balabalakang Islands were previously included in the administrative area of the Simboro and Islands sub-districts.

**Keywords:** *Salissingan Island, Maritime History, Learning Source*



# Educational psychology (EDPHY)



EDPHY-01

## **Application Of The Conceptual Model Of Buddhist Counseling Guidance Through Online Media During The Covid 19 Pandemic**

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### **Abstract**

The foundational teaching of the four noble truths serves as the foundation of the Buddhist counseling psychology conceptual paradigm. The Four Noble Truths are the most fundamental teachings of Buddhism, and both Mahayana and Theravada Buddhists subscribe to them. After a final exam was done at the implementation of the second session of the program, the participants of the application "Buddhist Counseling Psychology Training Model" increased their level of knowledge mastery from 46.67 percent to 78.24 percent. This finding implies that Buddhists need to improve their knowledge of Buddhist Guidance and Counseling resources while seeking direction or resolving personal, family, or communal issues. The participants' strength after this activity was also demonstrated by a variety of enthusiastic inputs.

Keywords: *models, buddhist, counseling, psychology*



EDPHY-02

## **Development of Individual Counseling Practice Module Cognitive Behavior Therapy to Reduce Student Academic Anxiety Disorder**

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### **Abstract**

Research aims to develop individual cognitive behavior therapy practice modules to reduce students' academic anxiety disorders. This type of research uses research and development (R&D) adapted from Borg and Gall with the process of analysis, design, development, implementation and evaluation. Data collection techniques use the Hamilton Rating Scale (HARS). The product test subjects used three person expert test to test the accuracy and feasibility of the module and tested a prospective user of two people to test the suitability and ease of the module. Research data in the analysis uses descriptive and inferential statistics. The results showed that 1) The individual counseling practice module cognitive behavior therapy to reduce academic anxiety disorders students developed has accuracy and feasibility used based on expert tests with excellent categories of 86,52%. 2) Based on the test of prospective users of the individual counseling practice module cognitive behavior therapy to reduce academic anxiety disorders of students developed into the category of excellent 87,10% of the aspects of exposure and ease. The research conclusion is a practice module of counseling individual cognitive behavior therapy to reduce academic anxiety disorders of students developed meet the criteria and worthy of use and utilization by counselors in the College.

**Keywords:** *anxiety, cognitive behavior therapy, modules*



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

EDPHY-03

## The Contribution Of Group Guidance Services To Increasing Student Learning Concentration

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### Abstract

This research aims to find out the contribution of group guidance services to improving student learning concentration. This type of research is quantitatively ex post facto with a correlational design. A sample of 138 students. Data collection techniques use questionnaires and interviews. Data analysis techniques use linear regression tests. The results showed there was a contribution of group guidance services to an increase in learning concentration with a result of 35.40 and had an 89% benefit and concluded that group guidance services contributed to improving students' learning concentrations.

**Keywords:** *contribution, group guidance, learning concentration*





# Elementary education (ELED)



ELED-01

## **Computational Thinking For Primary School Teachers: A Pilot Study On Building Problem-Solving And Literacy Skills**

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### **Abstract**

Problem-solving is one of the skills that is crucial to equip students to face a variety of challenges in the future as well as related to the development of their lifelong literacy skills. A number of studies conducted in the Indonesian primary education contexts such as by Trisniawati (2017) and Herlita, Sofiyan and Putra (2019) reveal that most primary school students are still unable to plan effective problem-solving strategies. One of the potential solutions for promoting students' problem-solving skills is introducing Computational Thinking, which facilitates students to look at problems, understand those problems as well as develop possible solutions (Hoppe dan Werneburg, 2019). However, particularly in the context of schools in East Kalimantan, both teachers and students have not been familiar with Computational Thinking. Therefore, this current pilot study would like to respond to this need by introducing Computational Thinking to teachers, especially primary school teachers, by developing a workshop and a module suitable to the local contexts and needs. This study involved 30 primary school teachers from Kutai Kartanegara Regency who had no prior knowledge and experience concerning Computational Thinking. The teachers were trained the basic concepts of CT and how to implement CT in the class especially in relation to literacy aspects. Afterwards, the teachers practiced using CT in their class and did a self-reflection on the process. The final findings and outputs of this current study are expected to be obtained completely in November 2021.

**Keywords:** *computational thinking, primary education, problem-solving, literacy*



ELED-02

## **Development Of Teaching Book Of Indonesian Learning Course In Elementary School For Students Of Education Study Program, Elementary School Teachers**

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### **Abstract**

The purpose of this research is to describe and develop textbooks in particular to improve the competence of undergraduate students in the Primary School Teacher Education Study Program for universities. The results of this study are expected to be a reference in the preparation of textbooks for learning Indonesian at universities based on the curriculum and improving the quality of students in learning so that competition can be achieved. The results of this study are descriptive explanations in the form of textbook products based on the development of teaching materials adapted from the Broge and Gale model. The research stages use eight steps, namely: (1) collecting information as data for needs analysis, (2) planning, (3) product design development, (4) product design validation, (5) product revision, (6) product testing, ( 7) product revision, (8) production of textbooks. The data collection instrument used in this study was in the form of a questionnaire given to media experts, material experts, and practitioners to test the quality of the e-book feasibility. The mandatory output of this research is a digital textbook in the form of an e-book.

**Keywords:** *development, textbook*



ELED -03

## Students' Perception of WhatsApp as a Media for Online Learning History in Class X IPS SMAN 1 Long Kali

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### Abstract

The purpose of this study was to determine the perceptions and obstacles faced by students in using WhatsApp as a medium for online history learning in class X IPS SMAN 1 Long Kali in 2021. This study uses a quantitative approach with a cross-sectional survey method with data analysis used in this study using a likert scale survey method with a total sample of 30 respondents who are students of class X Social Sciences. The research instrument used was a questionnaire with 10 statement items distributed online via google form. Based on the results of the study, the perception of class X IPS students of SMAN 1 Long Kali towards WhatsApp as a medium for learning history online has a positive value which is in the good category.

Keywords: *student perception, WhatsApp, history learning media, online*



ELED-04

## Study Of The Values Of Character Education In East Kalimantan Folklore And Its Relevance On Language And Literature Learning In Elementary School

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### Abstract

Improving the quality of education needs to be balanced with the moral development of elementary school students (elementary school). One way of moral development for the younger generation is through character education carried out in school institutions. study: is to describe the values of character education and know the relevance of character education values in East Kalimantan Folklore with character education in elementary school this research uses a qualitative approach with case study methods. The stage of providing data uses observations, interviews, and documentation. The initial stage of research, conducted the text of East Kalimantan Folklore using content analysis. Observations and interviews are used to observe the school's residents i.e. principals, teachers, and students. findings show that East Kalimantan Folklore consists of two types, namely legends and fairy tales. Nilai-values character education that is brave, responsible, social care, discipline, humble, and religion. Beaute, patiently obedient, optimistic, hard work, sincerely accept defeat and keep promises. Based on the 10 stories found, there are 7 stories that are relevant as literary learning material in school and there are 3 stories that are irrelevant. value character education in East Kalimantan Folklore is able to improve character education in schools.

**Keywords:** *Values of Character Education, East Kalimantan Folklore, Language Learning dan Literature, Elementary School*



ELED -05

## **Implementation of Distance Learning (Online) in the Era of the Covid-19 Pandemic in Mathematics Subjects for Angle Measurement Materials for Fourth Grade Students at SDN 007 Sungai Kunjang Academic Year 2020/2021**

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### **Abstract**

This research was motivated by learning mathematics on angle measurement material which was carried out online during the covid-19 pandemic. This study aims to determine the preparation of teachers in implementing online learning, to determine the implementation of online learning on angle measurement material, and to determine the supporting and inhibiting factors in applying online learning to angle measurement material in class IV SDN 007 Sungai Kunjang. This type of research uses qualitative research. This research was carried out in grades IV A, IV B, and IV C at SDN 007 Sungai Kunjang and the implementation time was in the second semester of the 2020/2021 Academic Year. The subjects of this study were homeroom teachers for grades IV A, IV B, and IV C at SDN 007 Sungai Kunjang. Data collection techniques used are interviews, observation, and documentation. Data analysis techniques in this study used data reduction, data presentation, and drawing conclusions. The results showed that the teacher had carried out online learning of angle measurement material with good preparation. The application of online learning of angle measurement material went well with obstacles that the teacher could overcome. The supporting factors for online learning are devices and adequate internet quotas and the inhibiting factor for online learning is not having a device and internet quota. Based on the results of the research above, it can be concluded that teacher preparation in carrying out online learning plays a major role in achieving learning objectives and adequate learning facilities will make it easier for students to carry out online learning of this angle measurement material.

*Keywords: distance learning, angle measurement, mathematics*



ELED -06

## **Implementation of the Online Learning Model During the Pandemic in the Thematic Learning of Fourth Grade Students at State Elementary School 001 Batu Putih for the 2020/2021 Academic Year**

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### **Abstract**

The purpose of this study were (1) to find out how to implement the online learning model in thematic learning; (2) to find out what are the factors that hinder the implementation of online learning in thematic learning, and (3) what are the supporting factors in the online learning process in thematic learning during the covid-19 pandemic in grade IV SD Negeri 001 Batu Putih. This research is a qualitative research with descriptive analysis techniques, the analysis of research data obtained online, the process of searching and compiling systematically, data obtained from observations, interviews and the field, namely data collection, data reduction, data presentation, conclusions and verification. The results showed that, 1) The implementation of the online learning model in class IV is by utilizing several kinds of applications, using lesson plans and evaluating written worksheets that can be taken and collected directly to the school; 2) The inhibiting factors in the implementation of online learning are the lack of effectiveness and time efficiency, the lack of student enthusiasm and the lack of students understanding the material; 3) supporting factors for online learning, namely, schools facilitate quotas for teachers in schools, and free internet quotas are given to students.

**Keywords:** *online learning model, thematic learning, elementary school*



# Higher education (HED)





HED-01

## **Plagiarism Awareness and Academic Writing Ability: The Relationship with the EFL students' Plagiarism Practice**

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### **Abstract**

Plagiarism is considered a writing difficulty and has been a topic among researchers in the past ten years. Many studies explored plagiarism perceptions and the reasons behind plagiarism. Some studies also attempted to find an association between the elements that might contribute to plagiarism such as writing skills, language level, studying behaviour, etc. However, most of the studies does not include the plagiarism rate or similarity index as one of the research variables. To fill this gap, this study aimed to find out whether there is any relationship between plagiarism awareness and academic writing ability towards the students' actual plagiarism practice. The 30 respondents are students of the English Department in Mulawarman University who has written an academic paper namely a Mini research proposal. This study design is a quantitative-correlational design with a Multiple regression data analysis technique. The study three main findings are; (1) there is no significant relationship between plagiarism awareness and plagiarism rate; (2) there is a significant negative relationship between academic writing ability and plagiarism rate; and (3) there is a simultaneous significant relationship between plagiarism awareness and academic writing ability with plagiarism rate. Additionally, academic writing ability has more influence on plagiarism rate than plagiarism awareness.

**Keywords:** *Plagiarism Awareness; Plagiarism Rate; Plagiarism Practice; Academic Writing Ability; Mini Research Proposal*



HED-02

## Perceptions Of Effective Teacher And Teaching: Voices of EFL Pre-Service Teachers

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### Abstract

Background – Teachers have a significant impact on students' learning and achievement and some teachers are clearly more effective than others at achieving desired educational goals. This study explores the effectiveness of teacher and teaching from the perspective of the EFL pre-service teachers. Purpose – This study explores perceptions of nine pre-service teachers about teacher and teaching when they enrolled in the Micro Teaching course as part of their self-reflection after completing the course. Design/methodology/approach – Nine pre-service teachers were voluntarily participated in this case study. They participated in the in-depth interviews and reflection journalings using Indonesian language to allow them freely express their experiences and thoughts. Content analysis was employed to analyze the data. Findings – The findings have indicated that generally the pre-service teachers have positive perceptions about their English teachers when they were at schools. They found that the teachers and experiences gained during in their schools have informed them what should be done for their students when they will complete their teaching particularly in the teaching practicum program. It has provided some reflections what should effective teachers do and what teaching should look like in the classroom. Research limitations – Only nine pre-service teachers participated in this study therefore the findings cannot be generalized. Future research could extend with more participants with data such as from observations and portfolios. Originality/value – The findings of this study implied that providing more knowledge and experiences during Teacher Education will shape better understanding about teaching and what teacher should be doing.

Keywords: *effective teaching, effective teaching, EFL context, pre-service teachers*



HED-03

## Profile Of Student Self-Regulation Learning In Applying Teaching Skills In Online Learning.

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### Abstract

The conceptual framework for understanding the cognitive, motivational, and student's self-regulated learning determined the emotional aspects of the learning process. This study aims to investigate student self-regulation learning in applying teaching skills in online learning situations. The survey method is used to find out whether students really plan, organize and help their own learning, we have asked questions according to the indicators of the Motivated Strategies for Learning Questionnaire instrument. The participants of this study were students of the Economics Education Study Program, Counseling Guidance, History, Pancasila and Civic Education, Mathematics, Indonesian Literature and English Literature. The total participants were 97 with compose of 25% male and 75% female. The results showed that students' self-regulation was in the medium group as many as 19 people (19.6%), high group as many as 68 people (70.1%) and very high group as many as 10 people (10.3%). Meanwhile, student self-regulation for each one indicator achieve consists of a rehearsal indicator of 26.80% with a poor group, an elaboration indicator of 48.45% in a good group, an organization indicator of 0% in a very poor group, an effort regulation indicator of 0% in a very poor group, metacognitive indicators 24.74% with less category. Based on the self-regulation group of each student and the percentage of achievement of self-regulation for each indicator, it said that the participants already have good rehearsal and elaboration abilities, but need to improve self-regulation skills, and independence to learn and solve problems.

Keywords: *self regulation learning, teaching skill*



HED-04

## **The Effect of Reflective Journal Authentic Assessment on Students' Writing Competence and Motivation**

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### **Abstract**

Several studies on Reflective Journal Writing (RJW) have highlighted the positive learning experiences either in writing skills or writing competence. However, most of them were for adult students. This study aimed to see it in high school students as demanded in the syllabus 2013. The respondents were 70 from the 360 population by using simple random sampling. A Mix-method approach answered the research questions with the writing competence, questionnaire, and interview instruments. The treatment group got the reflective journal writing while the control group without reflective journal writing six times. Pretest applied before the treatment and posttest after treatment and followed with a questionnaire and an interview. The data analysis used two-way manova, paired sample t-test, independent t-test, and Interview. The effect size shown in Eta Square for motivation was 86.4% or 0.864 categorized large effect and for writing 9.6% or 0.096 categorized moderate effect. RJW had a significant simultaneous effect on students' writing competence and motivation. The correlation of students' writing partially was .527. It was bigger than .05. RJW had a partial effect on students' writing competence. For motivation, the significance value was 7.488 meant that RJW had a partial effect. It supported with qualitative analysis that showed on students' willingness, desires of doing something, fun activity, enjoyment activity, satisfaction, and effort of facing problems. In conclusion, RJW was significant to increase or improve either students' writing competence or motivation.

**Keywords:** *Authentic Assessment, Reflective Journal, Writing Competence, Motivation*



## **The Effectiveness of TMLM on Student Teachers' Personality and Social Competence Measured With Teacher Competency Assessment in the COVID-19 Pandemic Era**

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### **Abstract**

Many pre-service education microteaching projects are aiming to address a range of difficulties that future teachers face in a variety of teaching situations while also enhancing the overall value of the teacher education program. Microteaching is another sort of teacher performance training that restricts the components of the learning process so that prospective teachers can master teaching skills and components one at a time in a smaller teaching environment. The TADALURING Microteaching Learning Paradigm (TMLM) is a microteaching learning model that comprises of three complimentary teaching practices: classroom, online, and offline practice. A study of TMLM was conducted with 20 teacher students in Magang 2 course on how to teach. Between pre - tests and post competency, participants' personalities and social competence developed. The objective of this study is to assess how effective TMLM is at increasing student teachers' personality and social skills as measured by Teacher Competency Assessment. Data collection techniques include observation, interview, questionnaire, recording, and testing of the study's findings. The data is analyzed with SPSS. Using a one-group pretest–posttest strategy, field testing was done in the field. The outcomes of student learning tests were analyzed using the t-test method (paired samples test). In the COVID-19 Pandemic Era, the effectiveness of the Tadaluring Microteaching Learning Model on Student Teachers' Personality and Social Competence as measured by Teacher Competency Assessment revealed that the average results of the experimental class after using the Tadaluring Microteaching Learning Model developed of 87.9795 amounted to 82.6025. These findings show that the microteaching approach developed can help student teachers enhance their personalities and social abilities.

**Keywords:** *Personality and Social Competence, Tadaluring Microteaching Learning Model (TMLM), Teacher Competence*



HED-06

## The Leading Economic Sector In Samarinda

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### Abstract

Economic growth can be influenced by the economic sector. To increase the economic growth of a region, it is necessary to determine the leading economic sector so that it can encourage the development of other sectors based on the business field. This study aims to determine the leading and non-leading economic sectors that provide a contribution to the economy of Samarinda. In this study, the researchers applied a quantitative study and utilized secondary data gained from the Central Statistics Agency. Data in this study were data concerning the PDRB of Samarinda and East Kalimantan in 2020. The employed data analysis was the Location Quotient (LQ) method utilizing the Microsoft Excel application. Results indicate that the leading economic sectors that have a large contribution to the economy of Samarinda are financial services and insurance with a contribution of 4.32%, while the non-leading economic sectors are agriculture, forestry, fisheries, mining, and quarrying, in which processing industries possess a contribution less than 1 to the economy of Samarinda.

**Keywords:** *Leading Economic Sector, Samarinda, PDRB 2020.*



HED-07

## **Profile of Middle School Teachers' Mathematical Literacy In Samarinda**

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### **Abstract**

Education plays an important role to solve problems that are increasingly complex. It is now required that education can equip and prepare graduates to be able to cope with job-related challenges. PISA has introduced the term mathematical literacy as one's ability to identify and understand the role of mathematics in making a suitable judgment in order to satisfy the needs of constructive and reflective citizens. The urgency of mathematical literacy has caught attention of many countries, especially Indonesia. However, mathematical literacy of teachers and students in East Kalimantan has never been studied in-depth. Data from 2019 National Examination for Secondary School implies that the province's mathematics mean score was lower than the national one. It is conjectured that the culture in East Kalimantan may have been the cause. Consequently, identification and mapping of middle school mathematics teachers in East Kalimantan are considered necessary. The current study aims to describe mathematical literacy of middle school teachers. It was an exploratory research with qualitative approach. The subjects were mathematics teachers from 23 middle schools in Samarinda and the object was mathematical literacy. Data were collected using questionnaire, observation sheet, and interview guideline. It was then followed by data reduction and coding, as well as representing into diagrams. Results of the study imply: 1) the subjects have a poor mathematical literacy in instruction planning and evaluation and a moderate instructional implementation. The results is expected to be a reference for further related research.

**Keywords:** *Ability, mathematical literacy, middle school teacher, mathematics learning*



HED-08

## Measurement of Mathematical Modeling in Mathematics Education Context: A Systematic Literature Review

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### Abstract

In recent years, the rise of mathematical modelling is well documented in the literature and curriculum like Australia, Germany, and Singapore because it helps students to tackle real-world issues using mathematics. The research presented in this article was a systematic review of the literature on assessment of mathematical modeling in the setting of mathematics education published in the previous five years. This research compiled the current best information from around the world to offer an overview of assessment of mathematical modeling for preservice mathematics teachers or mathematics teachers. We followed the approach used in Joklitschke et al. (2021), which involve 10 steps in systematic literature review (SLR). We accessed using Web of Science (WoS), Scopus and Journal for Research in Mathematics Education (JRME), Educational Studies in Mathematics (ESM), Journal of Mathematical Behavior (JMB), For the Learning Mathematics (FLM), Mathematical Thinking and Learning (MTL), Journal of Mathematics Teacher Education (JMTE), Zentralblatt für Didaktik der Mathematik (ZDM), and Mathematics Education Research Journal (MERJ). Based on a full-text analysis of 18 peer-reviewed papers published in English, it can be observed that most of the approach used to measure modeling competency were conducted by holistic. Finally, future trends and opportunities are discussed.

**Keywords:** *mathematics teachers, measurement, modeling competency, preservice mathematics teachers, systematic review*





# Language (LANG)



LANG-01

## The Difficulties Of Listening Comprehension Faced By The Fourth Semester Students Of English Department Mulawarman University

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### Abstract

The purposes of this study were to know the difficulties faced by the fourth semester students in Advanced Listening Comprehension Course at English Department and to know strategies used by the fourth-semester students in overcoming the difficulties in Advanced Listening Comprehension Course at English Department. The design of this study was descriptive with a qualitative approach. The population was the fourth semester students at English Department in Mulawarman University that consisted of 63 active students of fourth semester students at the English Department in Mulawarman University. Data were gathered by questionnaire and interview. The findings of this study showed that the students had difficulties in listening comprehension and strategies to overcome it. It was based on three factors influencing their listening: listening materials, listener factors, and physical settings. In addition, the major problems encountered by students of the English Department were: accents, pronunciation, speed of speech, insufficient vocabulary, the different accents of the speakers, lack of concentration, and bad quality of the recording. Furthermore, the strategy that the students implemented was using media as a learning tool. It can be concluded from this study that there were ten problems in students' self-learning that were found in analyzing students' difficulties, they were: lack of vocabulary, poor grammar mastery, accent, pronunciation, lack of concentration, speed of speech, anxiety, noisy, inability to apply listening strategy, bad quality of the recording.

Keywords: *listening, difficulties, comprehension, strategies*



LANG-02

## **The Preference of Assessment Techniques in Online Classes at Mulawarman University: The Lecturers' Perspectives and Practices**

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### **Abstract**

The online learning system has been implemented as a global response to the current situation in many universities, especially Mulawarman University, during the COVID-19 pandemic. This study was aimed to examine assessment techniques conducted in online classes. This study employed a survey study design by distributing questionnaires to 29 lecturers from various disciplines of Teaching and Learning Faculty of Mulawarman University. The data taken from the questionnaire were tallied in percentage. The findings revealed that both using Zoom as the platform to conduct group presentations and creating videos as the final projects were two assessment techniques, with the highest percentage of 65.5%, used by lecturers. This was followed by the lecturers' instruction to write an essay as a technique to assess the students with the percentage of 62.1%. However, the other techniques listed on the questionnaire resulted in the percentages lower than 50%, such as answering questions on Google Classroom with 44.8%, summarizing learning materials with 34.5%, and completing worksheets with 13.8%. These statistical results show that working together as a group for students to present the instructed materials on a virtual platform such as Zoom is still considered as one of the best strategies to promote collaborative work among university students. Likewise, the video creation is used to facilitate students in the current situations where technological devices become the common thing nowadays.

**Keywords:** *assessment technique, online classes, perspectives, practices*



## Clustering Academic Word List for ESL Undergraduate Program

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### Abstract

Academic word lists (AWL) are generally intended to be used by teachers who prepare their students for tertiary study or by university students in their independent study. The words in the AWL are essential for academic reading and comprehension, writing and presentation. Therefore, field-specific academic word lists are needed, not to mention for undergraduate students of the English Department. This study aimed at: first, generating the academic word list for undergraduate English Language Education program, second, clustering the academic word list into four levels, and third, specifying the academic word list into sequence and word families. This research employed corpus linguistic research or, to be more specific, corpus-based analysis category. The sources of data were from approximately 1000 articles from credible journals of applied linguistics published from 2008 to 2021. The collected data were processed to generate corpus using Antconc software. The corpus analysis followed some stages that include coding, classifying, describing/integrating, and categorizing into four divisions based on the targeted academic semesters. This research yielded the academic word list for undergraduate English Language Education program, which is divided into four divisions based on the frequency of occurrence and completed with their sequence and word families. Exposure to these academic words will equip students having academic goals to be aware of which words are most worth studying. The list can also be used as a useful basis for further research related to academic vocabulary in the field of applied linguistics.

**Keywords:** *academic word list, academic vocabulary, corpus, corpus linguistics*



## **The Technological Pedagogical Content Knowledge of The English Student Teachers at Mulawarman University**

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### **Abstract**

The purposes of this study were (1) to discover the English student teachers' level of the TPACK, and (2) to assess the English student teachers' perception of sub-dimensions of TPACK. The design of this study was EFL TPACK survey research. Students of the fifth semester of the English Department who have taken information about TPACK theory and are undergoing Literature in Language Teaching class (79) participated in completing the EFL TPACK survey. Both questionnaires included the raw scores data, and were converted into a Z score to make them balanced. Then this study used the SPSS 21 Program to analyze the data. The results of this study were: (1) the mean score of the English student teachers of TPACK after being converted into Z score was 50,00101 and classified as a moderate criterion; (2) The result regarding TK revealed that EFL student teacher's expertise in using computer peripherals (M=4.18). For CK, they indicated a positive attitude of comprehending texts written in English (M=3.96). When it comes to PK, they masterfully reflect the experiences that gain from the pedagogical course to their teaching process in the future. In terms of PCK, most of them were good at evaluating students learning to proceed (M = 3.64). Their TCK was good. The result indicated that they could use multimedia to express their ideas about various topics in English (M=3.61). Their TPK was also great in using multimedia to support language learning. In another sub-dimension, the English student teachers seemed to have good confidence in TPACK (M=3.44). They could design learning materials by using technology that supports students' language learning.

**Keywords:** *ICT, TPACK, English Student Teachers*



# Learning assessment and evaluation (LAE)



LAE-01

## **The Effectiveness of Ethnopedagogy-Based Digital Book Processing in Improving Civics Learning Outcomes in Distance Learning**

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### **Abstract**

Distance Learning in the midst of the current pandemic seems to be a challenge for the creativity of educators to find the right way how to continue to deliver learning materials effectively, the use of technology such as digital books as learning media is one of the appropriate and innovative steps so that the expected goals learning can be achieved. This study aims to improve the learning outcomes of class X SMK Negeri 1 Muargkyu on the subject of National Integration in the Unity in Diversity Frame. This study uses a class action research design. Data were collected through observation, self-assessment, peer-to-peer assessment, journals, interviews, and documentation. There are two data analysis is qualitative and quantitative. The corrective action of learning takes place in 2 cycles consisting of planning, action, observation, and reflection activities. During the learning activities, the students actively participate well. Learning activities that involve students starting from previously doing stimuli through ethnopedagogy-based digital books, observations, value clarification, discussions, compiling reports to evaluations. The results showed that it was successful in improving student learning outcomes of class X SMK Negeri 1 Muarkayu. Improved student learning outcomes (KKM) 90% of the total number of students as a whole.

*Keywords: E-Book, Learning Outcomes, Ethnopedagogy, Civic Education, distance learning*



LAE-02

## **Analysis of the Absorption of Economic Learning Materials at Madrasah Aliyah Level in South Borneo**

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### **Abstract**

Absorption is the ability to understand a subject that can be measured from learning outcomes. The purpose of this study is to analyze the picture of power absorb economic subjects at the Madrasah Aliyah (MA) level in South Borneo. This research is an ex post facto research with descriptive research type. The study used a population of all Madrasah Aliyah schools (public and private) throughout South Borneo for the 2016/2017-2018/2019 academic year. Sample in research these are all MA level schools (public and private) in South Borneo which take the national economic exam. The research variable is absorption. Data were collected by using the Exam Results document. National Education Assessment Center of the Ministry of Education and Culture. The data analysis technique used descriptive analysis technique. Research result shows that South Borneo Province has less absorption capacity, at the level of Cities/Regencies throughout South Borneo have insufficient and sufficient absorption capacity, in the level of Education Units throughout South Borneo the level of absorption is less, enough, as well as good. The lowest score achievement in general is the company's accounting material trade and the achievement of the highest value is the material of economic concepts. Achievement value the lowest level for public and private education units is company accounting material trade and achievement of the highest value is the accounting material of service companies

**Keywords:** *absorption, economic learning materials, national examination.*





LAE -03

## **Analysis Of The Vo<sub>2</sub>Max Ability Of Students Participating In Volleyball Extracurricular At SMK Bhakti Loa Janan Kutai Kartanegara**

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### **Abstract**

Volleyball extracurricular at SMK Bhakti Loa Janan Kutai Kartanegara has never done a physical condition test to determine the physical condition of the students. This study aimed to determine the VO<sub>2</sub>Max ability analysis of students who took volleyball extracurricular activities at SMK Bhakti Loa Janan Kutai Kartanegara. This research was conducted in the basketball court of SMK Bhakti Loa Janan with sample of 20 students. The data collection was using the Multistage Fitness Test instrument. The data were analyzed using the percentage of descriptive statistical formula. The results showed that the analysis of the VO<sub>2</sub>Max ability of students who took part in volleyball extracurricular at SMK Bhakti Loa Janan obtained a very poor category of 15% (3 students), less category 45% (9 students), medium category 35% (7 students), good category 5% (1 student), very good category with 0% and best category with 0%. Thus, it can be concluded that the VO<sub>2</sub>Max ability of students who took volleyball extracurricular activities at SMK Bhakti Loa Janan Kutai Kartanegara was in less category.

**Keywords:** *Endurance (VO<sub>2</sub>Max), Volleyball Extracurricular, Multistage Fitness Test*



LAE-04

## **Analysis of Online Learning Outcomes of Accounting Students of Class XI D AKL SMKN 1 Banjarmasin**

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### **Abstract**

Online learning is an alternative solution for implementing learning during the Covid-19 pandemic, although it triggers many problems for teachers, students, parents and educational institutions. The purpose of this study was to analyze the online learning outcomes of accounting in class XI D AKL students at SMKN 1 Banjarmasin in the odd semester of the 2020/2021 academic year. The approach used in this study is a qualitative approach. Determination of research subjects using purposive sampling, with a population of 36 students. The data collection technique is triangulation. The data analysis technique uses the Miles and Huberman model technique. Research result show learning Online Accounting class XI D can be seen from various aspects of learning outcomes indicators and several categories, namely: cognitive aspects, affective aspects, psychomotor aspects, and experience categories, opinion categories, feelings categories, knowledge categories, categories related to the five senses, and background categories or demographics. Overall, the results of online learning that are felt by students and teachers are less than optimal. Limited knowledge of technology makes online learning less enjoyable and lacks motivation.

Keywords: *learning outcomes, online, accounting*



# Literature education (LED)



LED-01

## Availability Of Sports Human Resources Reviewed From Sports Development Index In Samarinda City

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### Abstract

The sports development index is one way to measure the improvement of sports development in a region. This research aims to determine the availability of sports human resources in Samarinda City, reviewed from the Sports Development Index (SDI). The study was conducted in 5 sub-districts in Samarinda City, taking data from 3 institutions as a scope of research, including the Education Office, the Indonesian National Sports Committee of Samarinda City, and other non-formal institutions. Research methods use a survey method approach with a quantitative descriptive approach reviewed from SDI. The research instruments used are observation, interview, and analysis of documents. The data obtained is further analyzed using SDI analysis to investigate the availability of sports human resources. The results of this study show; The sports HR Index in the Ministry of Education 0.00062 falls into the low category, the HR Index of the Indonesian National Sports Committee 0.00035 belongs to the low-level category, the non-formal Institutional HR Index 0.000062 belongs to the low-level category. Overall the sports resources index in 5 sub-districts in Samarinda City of 0.00080 belongs to the low-level category.

Keywords: *human resources, Sports Development Index*



## **Analysis of Readiness for Implementation of Independent Learning-Independent Campus in Economic Education Students 2019/2020**

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### **Abstract**

Independent Learning-Independent Campus is a policy of the Ministry of Education and Culture that aims to encourage students to master various sciences that are useful for entering the world of work. This research is very important to do to determine the readiness of students of Economics education class 2019/2020 in facing the curriculum of Independent Learning-Independent Campus (*Merdeka Belajar Kampus Merdeka*, MBKM). The research method used is descriptive with a quantitative approach. The analysis technique uses descriptive analysis with percentage techniques and uses library research. The population in this study were students of Economic Education 2019/2020 University of Lambung Mangkurat Banjarmasin. The samples used were all students of Economic Education class 2019/2020 University of Lambung Mangkurat Banjarmasin with a total of 111 students, batch 2019 amounted to 66 students, and batch 2020 as many as 45 students. The variable of this research is the level of readiness for the implementation of MBKM. The instrument is a questionnaire which consists of 19 questions. The results of this study indicate that Economic Education students are "still not ready", this is reinforced by the results of the questionnaire obtained data as much as 70.3% of students stated that they know little about the MBKM policy, and on the readiness graph data obtained as much as 71.2% stated that they are not ready to be part of MBKM activities.

**Keywords:** *Independent Learning-Independent Campus, curriculum, readiness level*



# Science education (SCIED)



## Google Classroom Effectiveness Helping Educandy As Learning Media

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### Abstract

The current pandemic condition, namely the Covid-19 virus, has resulted in various schools having to implement online learning, therefore one way to help the online learning process to be more fun and not boring is to use learning media in the learning process. This study aims to determine the effectiveness of the Google Classroom assisted by Educandy as a learning medium on the chemistry learning outcomes of students at SMA Negeri 1 Kembang Janggut. The population and sample in this study were all students of class X MIPA SMA Negeri 1 Kembang Janggut as many as 89 students, the sample was determined using a saturated sampling technique. This research method is descriptive quantitative research design with One Group Pretest Posttest Design. The results of the calculations in this study are the average data for the analysis of N-Gain for learning outcomes is 0.603, which means that it is included in the medium category. Other support data can be seen from the average Effect Size analysis obtained at 1,414, which means that it is included in the category of large effect. In the questionnaire response analysis, students gave a positive response to the learning media of 79.63 with a very strong category. The success of this research process can be seen in the observation of activities at each meeting which reaches a success percentage of 90%. The results showed that the use of Google Classroom assisted by Educandy was effective as a learning medium at SMA Negeri 1 Kembang Janggut.

**Keywords:** *Educandy, Effectiveness, Learning Outcomes, Google Classroom.*

## **Antioxidant Activity And Antiproliferation of HeLa Cells From Methanol Extract of Leaves And STEM Bark of Mangrove *Avicennia marina***

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### **Abstract**

Indonesia stores thousands of species of medicinal plants that can be utilized. One of the plant species that has efficacy as an alternative medicinal ingredient is the mangrove plant *Avicennia Marina*. The purpose of this study was to find out the content of secondary metabolite compounds, antioxidant activity and antiproliferation activity of HeLa cells contained in methanol extract of leaves and bark of mangrove stems *A. marina*. This study was conducted 3 tests, namely phytochemical tests, antioxidant tests and antiproliferation tests. Phytochemical tests are conducted with color tests, these results showed methanol extract of mangrove leaves *A. marina* contains alkaloid compounds, flavonoids, steroids and tannins while methanol extracts mangrove stem *A. Marina* contains alkaloid compounds, flavonoids, triterpenoids and tannins. The antioxidant activity test is done using the DPPH method. The results of antioxidant activity test samples of *A. Marina* leaf methanol extract had an IC value of 50 of  $71.13 \pm 0.48064$  ppm and stem skin methanol extract. *A. marina* amounted to  $54.023 \pm 1.5843$  ppm. The results of antiproliferation activity tests showed an IC value of 50 *A* leaf methanol extract. *marina* amounted to 618.32 and methanol extract stem skin *A. marina* amounted to 305.44. Based on this, the antioxidant activity of *A. marina* leaf methanol extract and *A. marina* stem skin methanol extract is classified as strong and antiproliferation activity of *A* leaf methanol extract. *Marina* is classified as less active while methanol extract stem skin *A. Marina* is quite active as a cytotoxic agent.

**Keywords:** *Avicennia marina*, *Fitochemical*, *Activity Antioxide*, *Antiproliferasi*





SCI ED-03

## **STEAM (Science, Technology, Engineering, Arts, and Mathematics) based learning in Higher Plant Botany Courses in Tropical Rain Forests during the COVID-19 Pandemic**

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### **Abstract**

The Covid-19 pandemic has had such a huge impact on society, not only from the economic and social sectors, but also the education sector. On this basis, the government implements a policy in the education sector, namely face-to-face learning activities are replaced with distance learning. Higher Plant Botany is one of the compulsory courses in the Biology Education Department, Faculty of Teacher Training and Education, Mulawarman University which during the COVID-19 pandemic also implemented this policy through online learning. STEAM (Science, Technology, Engineering, Arts, and Mathematics) is a learning approach that gives students the opportunity to expand their knowledge in science and humanities. STEAM-based online learning is expected to be able to accommodate the needs and be a solution to the challenges of online Higher Plant Botany learning. This study uses qualitative interview analysis with data collection techniques with questionnaires and semi-structured interviews. The interview focused on the issue of students' perceptions of the benefits and challenges of STEAM-based learning in the Higher Plant Botany course in tropical rain forests during the COVID-19 pandemic. The benefits of STEAM learning are provide new experiences for students, effective, flexible, more master of technology and communication, can still interact between lecturers and students, learning can run optimally, learning can be carried out anytime and anywhere, time efficiency, while the challenges faced by students are internet signal interference which causes video transmission to be hampered and requires a large internet quota.

**Keywords:** *STEAM, higher plant botany, interview, COVID-19 pandemic*



## **Ethnographic Studies: Mapping of East Kalimantan's Biological Natural Resources for Chemistry Learning**

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### **Abstract**

Understanding the concept of chemistry will be more easily contextualized with natural phenomena, community culture and daily life (ethnochemistry). This study aims to map the biological natural resources in East Kalimantan as materials in the development of chemistry learning. This study uses ethnographic methods to obtain comprehensive, broad and in-depth information on the ethnochemistry of the people of East Kalimantan. Data were collected through interviews, documentation, and literature study, and analyzed descriptively. The results of this study, in the form of mapping the biological natural resources used by the people of East Kalimantan as food ingredients, food seasonings, medicines, preservatives, dyes, and cosmetics that can be used as analogies and representations in learning chemistry in schools.

**Keywords:** *Ethnochemistry, East Kalimantan, Chemistry learning*



## Novel Pyrazoline Analogues As Antibacterial Topoisomerase Inhibitor

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### Abstract

The replication stage of inhibition of pathogenic bacteria is important for stopping and propagating further. The DNA gyrase and Topoisomerase IV replication enzymes are well-known targets for infection management. For such a purpose, new pyrazoline analogues were conceived. To examine the possible binding mechanism and energy, docking experiments were conducted using AutoDock on inhibitory activity against topoisomerase II. RMSD value  $< 2$  was used to validate the molecular docking technique. The interaction of molecular docking showed distinguishing interaction among all three analogues. Even so, all analogues show an outstanding level of free energy from Gibbs.

Keywords: *pyrazoline, topoisomerase, molecular docking, antibacteria*



SCIED-06

## Utilization of Kirinyu STEM (*Chromolaena odorata L.*) and Brotowali STEM (*Tinospora crispa L.Mies*) as Herbal Pesticides in Red Spinach Plant (*Amaranthus tricolor L.*)

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### Abstract

Red spinach (*Amaranthus tricolor L.*) contains protein, fat, carbohydrates, iron, potassium, calcium, amaranthine, rutin, purines, chlorophyll, phytohormones and vitamins A, B and C. The demand for red spinach is increasing, but climate change that is not conducive and the poor quality of products produced by farmers are the reasons for the inhibition of red spinach commodity production. In red spinach plants, insect pests that are often encountered are leaf caterpillars such as Spodoptera, plusia, and Hymenia which eat the leaves of red spinach. Aphids (*Myzus persicae*) and Thrips sp and mites Pholipagotarsonemus latus are also often found attacking red spinach plants. This study aims to determine the effect of the extracts of kirinyu stem (*Chromolaena odorata L.*) and Brotowali stem (*Tinospora crispa L. Mies*) which can be applied to red spinach (*Amaranthus tricolor L.*) in an effort to overcome the intensity of pests in the city of Samarinda. The results of this study showed that a mixture of Brotowali leaf extract and kirinyu leaf extract had a significant effect on reducing pests on plants. Red spinach with the most effective concentration is 50%. The data obtained from observations and calculations were then analyzed using Analysis of Variance (ANOVA) and the treatment was tested by further BNT test with a significant level of 5%. The results of this study showed that a mixture of Brotowali leaf extract and Kirinyu leaf extract had a significant effect on reducing pests on red spinach plants with the most effective concentration of 50%.

**Keywords:** *Kirinyu stem, Brotowali stem, botanical pesticide*



SCI ED-07

## Activated Bledug Kuwu”S Clay As Adsorbent Potential For Synthetic Dye Adsorption; Kinetic And Thermodynamic

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### Abstract

Bledug Kuwu is one of the geological phenomena as a mud volcano that occurs in Kuwu, Purwodadi, Grobogan, Central Java. An investigation of Bledug Kuwu clay as an adsorbent for synthetic dyes has been carried out. The preparation of the adsorbent begins with washing the clay with distilled water, followed by activation using a solution of hydrochloric acid (1M). Activated Bledug Kuwu clay was characterized using FTIR spectroscopy, X-ray diffraction, scanning electron microscopy, and nitrogen gas adsorption-desorption (BET). Adsorption was carried out on the synthetic dye methylene blue with variations in contact time, variations in initial concentration, and temperature variations. Variations in contact time and initial concentration were used to determine the adsorption kinetics model. Temperature variations are used to determine the value of the thermodynamic parameters of enthalpy ( $\Delta H$ ), entropy ( $\Delta S$ ), and free energy ( $\Delta G$ ). The results of the investigation showed that the adsorption capacity of activated Bledug Kuwu clay reached 99% in an adsorption time of 20 minutes. The adsorption process of methylene blue with activated Bledug Kuwu clay as adsorbent was spontaneous and followed a pseudo second-order kinetic model.

*Keywords: clay, Bledug Kuwu, adsorption, kinetics, thermodynamics.*



SCIED-08

## **Analysis Of Science Process Skills In The Textbook: Tematik Mata Pelajaran IPA Tema V Ekosistem For Grade V Elementary School**

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### **Abstract**

Books have an important role in developing science. Books can be a source of teaching materials. Science, information, and entertainment can be obtained from books. Therefore, books are a mandatory component that must exist in educational institutions, both formal and non-formal educational institutions. Textbooks are expected to be able to help students to understand the lesson they have. In this study, the author examines the analysis of Science Process Skills (KPS) in Textbook: Tematik Mata Pelajaran IPA Tema V Ekosistem for grade V Elementary School. These skills include observation, communication, classification, measurement, inference and prediction which can be said as the basis for carrying out a scientific method. This study uses a qualitative - descriptive research method with the type of library research. The data source in this study is Textbook: Tematik Mata Pelajaran IPA Tema V Ekosistem for grade V Elementary School, revised edition 2017, published by Kementerian Pendidikan dan Kebudayaan. In this textbook, the author found that the percentage of the occurrence of KPS in sub-theme 1 was 83.33%, then Science Process Skills (KPS) in sub-theme 1 corresponded to KPS (S), in sub-theme 1 theme 2 found the percentage of KPS occurrence of 75%, then Science Process Skills (KPS) in sub-theme 2 corresponds to (S) KPS, in sub-theme 3 found the percentage of KPS occurrence of 66.6%, then in sub-theme 3 found the emergence of Science Process Skills (KPS) (M). After analyzing the Science Process Skills of Students on the Textbook: Tematik Mata Pelajaran IPA Tema V Ekosistem for grade V Elementary School, this book has a good capacity to be used by grade V elementary school students.

**Keywords:** *Science Process Skills, Observation, Communication, Classification, Prediction*



## Exploration Geometry Transformation from Samarinda Sarong

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### Abstract

Samarinda sarong is a masterpiece or typical craft of Samarinda and has become an icon of this city. This culture should be able to give attention to the people of Samarinda, because education based on local wisdom can grow the love of students to preserve the culture in where they live. The purpose of this study was to find out various transformation geometric concepts that found from the Samarinda sarong motif in the Weaving affairs village. The research method used a qualitative research with an ethnographic approach. The research was conducted at Cahaya Samarinda production in RT. 07 Weaving Village with the research subject Samarinda sarong and the object of research was the transformation geometric concept in sarong motif made. Research data were collected using documentation techniques. Data analysis was carried out by reducing, presenting, making conclusions, and then presenting in detail by linking supporting theories. Based on the result of the exploration, transformation geometric concepts were found, such us translation, reflection, rotation, dilatation and some compositions that was happened.

Keyword: *Samarinda Sarong, Ethno Mathematic, Transformation Geometry Concept.*



## Activity of Solar Screen from Avocado Skin Extract (*Persea Americana Mill.*) In Vitro

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### Abstract

Sunscreen is a preparation that is used on the surface of the skin that works to absorb, scatter or reflect ultraviolet light. Therefore, it is necessary to use the ingredients to become active ingredients in sunscreen. The research objectives are to (a) determine the content of secondary metabolites qualitatively from avocado skin extract (*Persea americana Mill.*). (b) To determine the total flavonoid content and total polyphenol content of avocado peel extract (*Persea americana Mill.*). (c) Knowing the sunscreen activity of avocado skin extract (*Persea americana Mill.*). This type of exploratory experimental research is based on a quantitative approach. The results showed that avocado skin extract (*Persea americana Mill.*) contained secondary metabolites. It is known that avocado peel extract has a total flavonoid content of 10.855 mgQE/g extract and a total polyphenol content of 221.593 mgGAE/g extract. It is known that avocado peel extract (*Persea americana Mill.*) has sunscreen activity with an SPF value of 3.887 at a concentration of 500 ppm including minimal protection category. The results of the activity test showed that avocado skin sunscreen potential had phenolic compounds. In addition to containing compounds that are antioxidants, tannins and ceilingoids

Keywords: *sunscreen, avocado peel, in vitro*





## Multirepresentation Ability Profile of Prospective Physics Teacher Students on Work and Energy Concepts

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### Abstract

Usually in physics learning includes four representations namely verbal representation, pictorial representation, mathematical representation, and graphic representation. The four representations are known as multi-representation. Prospective physics teacher students have multi-representation skills so that Prospective physics teacher students can understand the theories and concepts of physics they are studying. This study aims to determine the multi-representation ability of Prospective physics teacher students. This study involved the Prospective physics teacher students of the even semester physics education study program for the 2020/2021 academic year at one of the universities in the East Kalimantan with a total sample of 51 Prospective physics teacher students. This research instrument uses a test item consisting of 24 items with formats including verbal representations, pictorial, mathematics, and graphics. Each representation has 6 reasoned multiple-choice questions. Research data is based on Prospective physics teacher student's answers that are assessed based on an assessment rubric guided by a multi-representation rubric developed by Rutgers Physics and Astronomy Education (PAER). The results showed that 35.8% of Prospective physics teacher students were able to represent concepts mathematically, 28.9% of Prospective physics teacher students were able to represent concepts pictorially, 27.8% of Prospective physics teacher students were able to represent concepts graphically and 23.4% of Prospective physics teacher students were able to represent concepts verbally. Based on these results, Prospective physics teacher students' multi-representation abilities are more dominant in mathematical representation abilities. The recommendation in this study is that Prospective physics teacher students need to improve multiple different representations so that it is possible to connect physical concepts with symptoms they experience in everyday life through their thinking skills.

**Keywords:** *multirepresentation, work and energy*



SCIED-12

## **Validity of Physical Teaching Materials Based on The Potential of Humid Tropical Forests and Their Environment on Global Warming Materials and Its Impact on Life**

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### **Abstract**

The purpose of this study is to determine the level of validity of teaching materials in the form of prototypes of physics teaching materials based on the potential of humid tropical forests and their environment on global warming material and its impact on life. This research adapted Analysis, Design, Development, Implementation and Evaluation (ADDIE) development model. The overall assessment results from validators and practitioners obtained score of 3.57 and 3.18 with good criteria. Thus, the teaching materials could be declared valid.

**Keywords:** *validity of teaching materials, humid tropical forests, global warming.*



# Secondary education (SECED)



SECED -01

## **Energy Literacy Level of Junior High School Students is linked to gender issues in Tanah Grogot District in East Kalimantan Province**

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### **Abstract**

Energy literacy is an understanding of the nature, role and impact of energy in the world and everyday life, as well as the ability to use this understanding to answer and solve problems with three dimensions, namely the dimensions of knowledge, attitudes and behavior. Knowledge of energy so that it becomes one of the solutions in reducing excessive energy use. The purpose of this study is to describe the energy literacy level of junior high school students in terms of gender issues. This research is quantitative descriptive. Data was collected using the energy literacy assessment questionnaire instrument compiled by Akitsu et al (2017), which consists of 140 questions given in 3 stages. The research sample consisted of 100 junior high school students in Tanah Grogot Regency. The results showed that the energy literacy level of male and female students was in the medium category, and there was a significant difference in the energy literacy level of male and female students. The energy literacy level of female students is higher than the energy literacy level of male students.

Keywords: *energy, literacy, level, gender*



SECED-02

## Investigating Gender Differences in Senior High School Students' Motivation to Learn English Online During The COVID-19 Pandemic

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### Abstract

A lot of research has been conducted to examine the effect of gender differences on language learning motivation in various learning environment, yet the outcomes remain contradictory. This study investigates gender differences on 568 Indonesian senior high school students' motivation to learn English online during the COVID-19 pandemic. In this quantitative enquiry, the data were collected using a motivational questionnaire containing a number of items indicating motivational components. One-way MANOVA was performed to examine not only the students' overall motivation, but also the effect of gender differences on three motivational variables, namely instrumental orientation, self-efficacy beliefs, and self-regulation. The findings revealed that the students' overall motivation differs by gender. Furthermore, it was indicated that female students possessed higher levels of motivation than male students in learning English online. The results support the growing stereotype claiming that female learners tend to outperform their male peers in language learning. The analyses on the motivational variables indicated that female students had higher level of instrumental orientation and they were more self-regulated compared to male students. In terms of their self-efficacy beliefs, no significant differences detected between male and female students in learning English online during the COVID-19 pandemic.

**Keywords:** *gender differences, motivation, online learning, motivational variables*



SECED-03

## **Study On The Formation Of Character Discipline And Care For The Environment Through Plastic-Free Healthy Schools Program At SMK Health Samarinda**

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### **Abstract**

Riska Reskia Utami, the Faculty of Education University of Mulawarman. Study on Discipline Character Development and Environmental Care through the Plastic-Free Healthy School Program at Samarinda Health Vocational School. Under the guidance of Mr. Prof. Dr. H. Moh. Bahzar, M.Si as supervisor I and Mrs. Dr. Hj. Suryaningsi, MH as supervisor II. The type of research used is descriptive qualitative. This research focuses on the Study of Discipline Character Development and Environmental Care through the Plastic-Free Healthy School Program at SMK Kesehatan Samarinda. The research implementation techniques are observation, interview, documentation and triangulation. Sources of research data are primary data sources 3 people. While data analysis consists of collecting data or reducing data, presenting data and drawing conclusions or verifying data. The results of the study show that the implementation of Discipline and Environmental Care Character Development through the Plastic-Free Healthy School Program at the Samarinda Health Vocational School to teach students to care more and respect the environment has been running according to the previously planned plan. Barriers encountered both internally and externally from the implementation of character development are evaluated and find solutions in order to foster the disciplined character of students.

**Keywords :** *Character Development, Discipline*



SECED-04

## Islamic Senior High School Students' Perception on The Online Chemistry Learning Using E-learning Madrasah

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### Abstract

This research goal was to know Indonesian Islamic senior high school students' perception on the online chemistry learning by using E-learning Madrasah. This research was a quantitative descriptive research. The student perception was collected by using a validated questionnaire (24 items) with a four-point (1-4) nominal scale (strongly disagree - strongly agree). Five analyzed factors were easy of access, perceived usefulness, communication and interaction, perceived instruction delivery, and student's satisfaction. Participants were 77 of 10<sup>th</sup> and 11<sup>th</sup> grade of natural science student of Indonesian Islamic senior high school. Course was mixed synchronous and asynchronous online learning using E-Learning Madrasah. Teaching materials i.e. PowerPoint, student worksheet, and learning video link were shared before the scheduled synchronous learning. The results show that the students agreed that the E-learning Madrasah was easy to access, useful for the learning, provided a good communication and interaction between teacher and students, performed readable, clear and easily understood instructions, and gave a satisfaction to student on the designed learning. In general the students were agreed that the E-learning Madrasah was an appropriate platform on the chemistry online learning. This research shows the perceptions of Indonesian Islamic senior high school students from natural science major on the chemistry learning by using E-learning Madrasah platform. This research shows that the effectiveness of the E-learning Madrasah on the online chemistry learning.

Keywords: *chemistry, CoVid-19, E-learning Madrasah, online learning, student's perception*



SECED-05

## **An Investigation of Teaching English Grammar through Distance Learning at SMAN 1 Samarinda**

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### **Abstract**

The purposes of this study were to know how the teacher teaches English grammar through distance learning and investigate the problems during implementation of teaching English grammar through distance learning. The design of this study was qualitative research design which was characterized by a case study. The participant was selected through purposive sampling. The data were analyzed by using the interactive analysis model. The researcher used the triangulation by data source, triangulation by method, and triangulation by theory to check the validity and reliability of this study. The findings revealed that the English teacher applied teaching grammar in context, inductive and deductive approach and integrated grammar with language skills. In addition, the English teacher used flipped-classroom model a form of blended learning that combines synchronous and asynchronous online learning with WhatsApp, Google Meet, and Google Classroom as the teaching platforms. In its implementation, the English teacher faced some problems in the process of teaching English grammar through distance learning. Those problems were student discipline, limited time, teacher's extra workload, distance between teacher and students, classroom management and technical problem. In conclusion, teaching English Grammar through distance learning can be conducted and maximized by having well preparation on learning activities, well communication and collaboration between the teacher and students in teaching and learning process to achieve the learning objectives.

**Keywords:** *Teaching English Grammar, Teaching Problems, Distance Learning*





# Critical pedagogy (CP)



# The 4<sup>th</sup> Educational Science International Conference

Towards a Sustainable Future of Education: Preparing Teachers and Prospective Teachers for the Digital Age

CP-01

## The Role Of Metacognitive Skills In Developing The 21<sup>st</sup> Century Skills

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Pintaka Kusumaningtyas**

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### Abstract

Metacognition is one of the most important dimensions of education in building knowledge, skills and character of students. The metacognitive skills are indispensable in developing the 21<sup>st</sup> century skills that must be mastered by students. This paper provides a review of literature that emphasizes on the 21<sup>st</sup> century skills that can be developed through the metacognition in learning. The finding reported the 21<sup>st</sup> century skills that can be developed in learning using the metacognitive skills included the ability in problem solving, critical thinking, reflective thinking and accessing information. As such, it can be concluded that the metacognitive skills of students can be one of the key factors in students' successful in mastering the 21<sup>st</sup> century skills.

**Keywords:** *metacognitive, problem solving, critical thinking, reflective thinking, accessing information.*



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