

ICLS9

# International Conference on Lesson Study

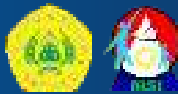


11 October 2018

## Book of Abstract

*“Fostering Equality in Lesson Study  
for Learning Community”*

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## **WELCOMING SPEECH FROM RECTOR OF UNIVERSITAS PAKUAN**

Distinguished President of Association of Lesson Study Indonesia, Mr. Sumar Hendayana, Ph.D.

Distinguished keynote Speakers/invited speakers

Respectable Delegates and Guests

Honorable Presenter and participants

Ladies and Gentlemen...

Welcome to the 9<sup>th</sup> International Conference on Lesson Study (the 9<sup>th</sup> ICLS) at Universitas Pakuan Bogor Indonesia. It is organized with the aim of sharing information and discoveries related to research-based lesson study.

Lesson Study is an improved learning quality approach implemented by teachers in a collaborative manner to achieve the learning objectives, to carry out learning, to observe the implementation of the lesson, and to reflect on the learning studied for improvements in the next lesson plan. The main focus of lesson study implementation is student activity in the classroom, assuming that the student activity is related to teacher activity during classroom teaching.

Since Universitas Pakuan got the Grant of Lesson Study from the Ministry of Research, Technology and Higher Education in 2012. Universitas Pakuan consistently implemented the Lesson Study. We have collaborated with many schools in Bogor, and some of them are our piloting school. Currently, two faculties implemented Lesson Study there are Faculty of education and faculty of Mathematics and Natural Sciences.

This conference is expected to provide and share information about the development of lesson study implementation results in each country.

Thank you for your attention, and have a nice conference...

## INTRODUCTION

Nine years ago faculty of Mathematics and Science of University of Education of Indonesia (UPI) was initiating the commencement of a conference on Lesson Study for disseminating the best practice of Lesson Study of **SISTEMS** (Strengthening In-service Teacher Training of Mathematics Education at Secondary Levels) in West Java. The Implementation of Lesson Study was started from one regency in West Java namely Sumedang. Then, it spreads into 16 regencies in West Java. The conference of Lesson Study had been well known as Indonesia Conference on Lesson Study (ICLS). The first through the fifth ICLS was held by Indonesia University of Education supported by the Education Departement of the Government of West Java that involved all teachers in West Java Province. In order to build up the network of lesson study to be wider in the level of national and international, all initiators of lesson study in Indonesia agreed that the 6th ICLS in 2015 and the following years will be held at other universities in Indonesia. Therefore, the 6th ICLS in 2015 was held at Ganesha University of Education in Singaraja Bali. Since the commencement of the 6th ICLS, it was spreaded into the International Conference on Lesson Study (ICLS). In 2016 the 7th ICLS was held at University of Muhammadiyah Malang and Hamzanwadi University held the 6th ICLC in Lombok.

The University of Pakuan will host the 9th ICLS which will be held on 11-13 October 2018. The theme of the conference is **Fostering Equality in Lesson Study for Learning Community**. Attending the 9th ICLS, participants will gain invaluable frontier knowledge about education and pedagogy since the 9th ICLS has confirmed the attendance of the caliber international speakers such as Professor Manabu SATO from Japan, Professor Christine Lee from Singapore, Professor Siripaarn Suwanmonkha from Thailand, Professor Anna Permanasari from Indonesia, and Sumar Hendayana, Ph.D. the president of ALSI. Besides, the 9th ICLS will facilitate the experts of elementary, secondary, and higher education to share their experiences or the results of their innovation especially in learning improvement that is specially developed through lesson study. The special characteristic of ICLS is that during the commencement of the conference, there will be a package of "school visit". In this session, the participants of the conference will be led to visit the schools that have implemented lesson study. Therefore, the participants will get opportunity to observe the student learning through lesson study which guide the students to learn by utilizing the local materials. I as the president of ALSI cordially invite the policy makers, education stake holders, and education practitioners to participate in the 9th ICLS. The other advantage of taking part in the 9th ICLS is all participants will automatically become the member of the Association of Lesson Study Indonesia (ALSI). I wish the 9th ICLS in University of Pakuan in Bogor can run very well as it is expected.

## **A FOREWORD OF THE CHAIRPERSON OF THE 9TH ICLS: FOSTERING EQUALITY IN LESSON STUDY FOR LEARNING COMMUNITY**

**Dr. Eri Sarimanah, M.Pd**

**The Chairperson of the 9th ICLS**

Assalamu'alaikum Wr. Wb

A warm welcome extended to the publication of this edited abstract book, an abstract collection of plenary papers and parallel papers under the sponsorship of the 9th International Conference on Lesson Study theme “Fostering Equality in Lesson Study for Learning Community.” ICLS is an annual meeting (henceforth conference) conducted by among scholars and practitioners who are concerned with sound research and solemn discussion in a classroom context where situated in lesson study. Chiefly this context, this annual meeting becomes a mandatory for conducting the 9th ICLS. The 9th ICLS is organized by Universitas Pakuan Bogor in collaboration with Indonesian Association of Lesson Study (henceforth ALSI) and the Ministry of Research, Technology and Higher Education. This conference is conducted on 11th – 13th October 2018.

Throughout this foreword, we would like to express our sincere gratitude due the following invited keynote speakers of this conference; Prof. Manabu Sato, Ph.D (Gakushuin University, Japan), Prof. Christine Lee, Ph.D (Nanyang Institute of Education, NTU Singapore), Prof. Dr. Anna Permanasari, M.Si (Pakuan University, Indonesia), Prof. Assoc Tatsuya Kusakabe, Ph.D (Center for the Study of International Cooperation in Education; CICE, Hiroshima University, Japan), Sumar Hendayana, Ph.D (Indonesia University of Education, Indonesia), Prof Siripaarn Suwanmonkha, Ph.D (Chulalongkorn University, Thailand), , due to their contributors to the 9th ICLS mission. Our sincere appreciation is due to subsequent to the following speakers; Ms. Naomi Takasawa (JICA, Japan), Rie Takahashi (PICO, Thailand), Prof. Yoshida Kazuhiro, Ph.D (Hiroshima University, Japan), Ms. Yamane Tomomi (Hiroshima University, Japan), Prof. Chayapim (Chulalongkorn University, Thailand), Yoko Takimoto (Gakushuin University, Japan), Kanoko Katanayagi (Tokyo University, Japan), Zanaton binti Hj. Iksan, Ph.D (University Kebangsaan Malaysia), Sayyidah (University Kebangsaan Malaysia), Noel Jimbai, Ph.D (Sarawak, Malaysia). Additionally, we would like to express our thanks to the practitioners, researchers, teachers, school principles, and others who are willing to contribute an article to this valuable conference. Their ideas, experiences and recent research findings in the field of teaching and learning process based on lesson study are value-added teacher professional development.

School visit plays an influential role for every Lesson Study conference, so is throughout the 9th ICLS. In the 9th ICLS, four partner schools are applying ‘Do’ cycle for host school visit. The school are namely SDN Kencana 3, SMPN 1 Cigombong, SMPN 3 Cibinong and SMPN 4 Cibinong. Therefore, this school visit remains as one of the main agendas of the 9th ICLS. This school visit is issued of the last day of ICLS. Throughout the school visit, the trained teachers will present best practices to the 9th ICLS participants. It is aimed at providing a completed and fruitful experience for in the implementation of Lesson Study to all participants.

Overall this conference covers valuable plenary sessions. Moreover, we conceded around 123 registered papers form Indonesia, Japan, Singapore, Thailand, and Malaysia where presented in parallel sessions. It will be of interest of practitioners and scholars in the teacher professional development domain. We do hope that participants will find this conference vitamin and energy for thought and classroom improvement.

**CONFERENCE THEME:**

In proudly hosted by Universitas Pakuan  
Fostering Equality in Lesson Study for Learning Community

**ORGANIZATION:**

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## TABLE OF CONTENT

WELCOMING SPEECH FROM RECTOR OF PAKUAN UNIVERSITY .....	i
INTRODUCTION .....	ii
A FOREWORD OF THE CHAIRPERSON OF THE 9TH ICLS: FOSTERING EQUALITY IN LESSON STUDY FOR LEARNING COMMUNITY .....	iii
ADVISORY COMMITTEE: .....	v
TABLE OF CONTENT .....	vi
Secondary teachers' mathematical literacy on context-based linear function problem: focus on formulating situations mathematically .....	1
Experiences in the implementation of lesson study for learning: case study in junior high school 13 Palembang .....	2
The Level of Students' Cognitive Development through Scientific Approach in Lesson Study on Natural Science Materials .....	3
How Do Teachers Learn from Their Classes? A Comparative Case Study on Lesson Study Implementation in SMAN 5 Kediri East Java and Teacher Pre-Service Program of the University of Nusantara PGRI Kediri.....	4
Application of Lesson Study and Entrepreneurship-Based Learning to Improve Lecturer Pedagogy Competencies .....	5
Teacher's Ability to Use and Develop Learning Media through Lesson Study as A Teacher Professional Development Model .....	6
The Implementation of Project-based Learning for Independently Designing Learning Resources to Improve Student's Comprehension on Biology Concepts through Lesson Study in Senior High School Agni .....	7
Developing the Design of Learning Activities to Improve Problem Solving Abilities for Children Aged 5-6 Years.....	8
Improving students' scientific communication skills through increased online learning activities in preservation course .....	9
Doing Role Play to Enhance the Understanding and Skill of Students .....	10

Effectiveness of Formulation of Questions on Lesson Study Activities in Gagasceria Preschool .....	11
Editing Indonesian-language manuscripts.....	12
Pupils' Intra-dialogue in the Context of Problem Solving Polyhedron Geometry: Phenomenological Studies .....	13
Exploring Learning Support Pattern during Lesson Study on Science Lesson with Lesson Analysis .....	14
The Development of Lesson Study for Learning Community Through LSLC Club in Universitas Mataram.....	15
Lesson Study in The Implementation of Adapted Physical Education as Clinical Didactics .....	16
Lesson Study and Its Role towards Magang III FKIP (Faculty of Teacher Training and Education) at Cokroaminoto Palopo University: Value and Guidance .....	17
Improve Probability Learning Activities using Think Pair Share through Lesson Study for Learning Community on FKIP UNIPA.....	18
Policy Implementation on Educational Reform Developing Student's Professional Skills through Lesson Study Coaching and Mentoring to Build a Professional Learning Community .....	19
Collaboration of TPACK (Technological Pedagogical Content Knowledge) Biology Learning Tools in Assessing Student Activities Trough Lesson Study in Senior High School Pasundan 1 Bandung .....	21
Implementation of Google Classroom as Media in Elementary School Teacher Education Universitas Pasundan .....	22
Effective Area Arrangement for Classes 2-4 years old .....	23
Students' Representation of Addition and Subtraction .....	24
Improving Listening Skill Using Collaborative Learning Methods Through Lesson Study.....	25



The Implementation of Lesson Study Using Discovery Learning Model and Constructivism Students' Worksheet on Relations and Functions Material in the Seventh Grade.....	26
Lesson Study-Learning Community Materials of The Least Common Multiple in SDN 1 Junrejo Kota Batu-Malang .....	27
Jigsaw cooperative learning in increasing motivation and learning outcomes of class XI IPS students 2 SMAN 5 Mataram school year 2016-2017 .....	28
The Role of Teacher-Lecturer Collaboration In Learning Method Development ...	29
Improving Junior High School Students' Independent Learning .....	30
through Learning Community Model .....	30
Pre-Service English Teachers' Experiences in Learning through Lesson Study .....	31
Development of Lesson Plan Through Collaborative and Reflective Learning For Students of Teacher Candidates .....	32
The Implementation of <i>Learning Cycle 5e Models</i> on Structure and Function of Plants to Improve The Ability of The Second Year of Student Junior High School 21 Pekanbaru in Scientific Literacy .....	33
Lesson Study as a Pedagogic Development of Teachers and Lecturers for Improving The Quality of Learning and Improving The Quality of Students Learning.....	34
Model teachers perception on the feasibility of chapter designs in their open class activities (a case study) In the learning process, teachers and lecturers use a lesson plan. Unlike the common learnin .....	35
Application of Lesson Study and Its Influence to Understanding University Student Learning.....	36
Piloting School of Lesson Study: School Potential and Stakeholder Support in Digital Information Era 4.0.....	37
Piloting School of Lesson Study: School Potential and Stakeholder Support in Digital Information Era 4.0.....	38
Using Lesson Study for Learning Community for Developing the Capability of Biology Education Students through Action Research in Education Course .....	39

Cognitive Student Descriptions in Mathematics Learning Through Lesson Study .	40
Improving The Ability of The Teachers Competency Through Lesson Study at The Cluster School I, III And V in Prigen Pasuruan East Java .....	41
Caring Community In Mathematics Learning Through Cooperative Learning .....	42
The Benefits of Video Recording for Lesson Study Observation and Reflection Activities.....	43
Collaborative Learning: Towards 21st Century Learning Skills .....	44
The Effect of Behavior Cognitive Counseling With a Modeling Technique on The Arousing Self Potential in Directing Individuals in The Era of Industrial Revolution 4.0.....	45
Improving Teacher’s Professionalism Through School-Based Lesson Study at Cluster III Elementary School in Marga District.....	46
Improving Teacher Job Satisfaction Through Organizational Culture And Work Motivation .....	47
Developing Learning Methods with TPACK Approach for the Subjects of Cleavage and Blastulation in Embryology through Lesson Study .....	48
Planning and Implementation of Soft Skills Students Through Empowerment of Student Activities in Education Oriented Lesson Study.....	49
LSLC Impact on Model Teachers at Piloting Schools in Batu Tourism City .....	50
Giving feedback from peers to improve the quality of essay for grade 6 students ..	51
Learning Science, Technology, Engineering, Art, and Math (STEAM) assisted by E-Learning-based Virtual Laboratory Media on Students' Metacognition Ability in Physics Experiment Courses .....	52
Implementation of Android-Based Mobile Learning Media an Efforts to Improve The Quality of General Biology Learning Through Lesson Study of Biology Education Students in University of Papua .....	53
Development Model of Special Education Teachers Competency through Lesson Study.....	54

Lesson study as a learning system: The historical development of lesson study in Japan .....	55
Problem Based Learning to Enhance Students' Collaborative Skills .....	56
Implementation of Lesson Study Using Problem Based Learning (PBL) Type Audio Visual Media.....	57
Effect of Lesson Study on Class 7C Mathematics Learning in Bandung BPI 1 Middle School.....	58
Teachers perception on classroom management in English teaching before and after lesson study implementation.....	59
The Implementation Of "Jumping Task Model" in Lesson Design As A Bridge To Help Teachers Improving Learning Quality.....	60
Improving Students' Self Efficacy Through Peer Teaching Method Based Lesson Study.....	61
How to improve the quality of student writing through the Collaborative Learning method? .....	62
How Lesson Study Regarding Classroom Dialogue Affect on Students' Perceived Situational Learning Processes. ....	63
Research Question, Attitude Listening to Teachers and Children .....	64
The Cultivating of Socio-Emotional Through Lesson Study for Learning Community (LSLC) to The Students at Kindergarten IDHATA.....	65
Utilization of the Learning Forest Prototype to Increase the Students Careness Character of Environment through the Lesson Study for Learning Community (LSLC).....	66
A Meta Analysis Study of The Effectiveness of Lesson Study Implementations in Teaching .....	67
The Effectiveness of Lesson Study in Improving the Lecturers' Performance in Learning Process at Faculty of Teacher Training and Pedagogy in Dwijendra University Bali.....	68
Pedagogical Dialogue: Collaborative learning strategies .....	69

Bahasa Melayu Teachers' Perception Towards Professional Learning Community (PLC) Lesson Study In Three Districts in Sarawak .....	70
Reflection on the Implementation of Lesson Study for Learning Community (LSLC) in West Sumatra 2014 – 2018.....	71
The Impact of Open Lesson on Teacher Reflection in Improving Learning Quality .....	72
Descriptive analysis of students' responses at 7th grade students of SMP 2 Ternate in the solar system learning using jumping task method. ....	73
Analysis of Collaborative Learning Improvement Through Lesson Study For Teachers.....	74
Improvement Critical Thinking Skill Using Discovery Learning Trough Lesson Study in Bhakti Winaya Primary School Bandung .....	75
The Process of Studying A Cognitive Empathic Understanding: Student Interaction Approach .....	76
Implementation of Lesson Study to Stimulate Students' Participation in Designing A Lesson Plan (A Case Study on English Teaching Development Course) .....	77
The Implementation Of Edugames In The Learning Of Indonesian Heroes .....	78
Integrating Luwu Local Culture into the Teaching of Reading Comprehension (Students' Participation and Perception).....	79
Designing Jumping Task on Multiplication using PMRI and Collaborative Learning for Third Grade Students .....	80
Instructional Design Linear Equations with Two Variables using Dart Games and Lesson Study for Learning Community (LSLC).....	81
Implementation of Collaborative Learning in Climate Change Based Research Student on MIPA FKIP Tanjungpura University .....	82
Students' Response towards The Use of Running Dictation Method in Zoology Invertebrate Course through Lesson Study Activity .....	83
The Development Of Project Teaching Model Towards Students' Culinary Feature Writing Skill In Development Writing Skill Subject .....	84

Developing Students Critical Thinking Ability Through Lesson Study .....	85
Students' Interaction in The Environmental Sciences Classroom: Implementation of Argumentation Real-World Inquiry Model.....	86
Effectivity of Student Book Based on Ethnobiology of Biodiversity Matter To train Critical Thinking Skill .....	87
Implementation Lesson Study Assisted Learning Management System Moodle- in Efforts to Improve Learning Outcomes in Courses Review of Junior High School Mathematics Material at Faculty of Teacher Training Education Pancasakti University Tegal .....	88
Strategy of jumping task implementation to improve student activeness, collaboration and conceptual knowledge in learning practice base on lesson study	89
An outing: a creative teaching to motivate and engage students in learning English productive skills.....	90
Analysis of classroom learning management systems to improve communication and collaboration skills. ....	91
Exploring the Inquiry Laboratory and Student Collaboration through Lesson Study for Learning Community .....	92
Improving Professional Commitment Through Development of Organizational Climate and Self-Efficiency.....	93
Teachers learn as children learn. Lesson study implementation in SD Gagas Ceria Bandung.....	94
Task-Based Performance to Improve Students' Competence Holistically .....	95
in Cross Culture and Literature Learning (CCLL) Class.....	95
21st Century Learning Through Open Problem-Solving.....	96
The Challenges Faced by the Model Teachers in Implementing Lesson Study. ....	97
Students' Perception On Implementing Lslc (Lesson Study For Learning Community).....	98
How Can Teachers Become Good "Listeners" for Students?.....	99

Implementation of Lesson Study for Learning Community to Build A Culture of Learning Quality (Case Study on Students of The Faculty of Mathematics and Natural Sciences) .....	100
Planning for Lesson Study-Based HOTS Learning Development.....	101
Implementation of Problem Based Learning (PBL) assisted by E-Learning through Lesson Study Activities to improve the quality of learning in Physics Learning Planning Courses. ....	102
Improving Students' achievement by Implementing Cooperative Learning Type Two Stay Two Stray on Circulation System material in Senior High School Using Lesson Study.....	103
IbM Implementation of Integrater character that learning disobey chemistry and biology is lesson study base because of conctructive intelligence student SMA Parigi Moutong dan SMA Kota Palu .....	104
Making Biopories in Application of Problem Base Learning to Improve Adiwiyata Insights in Students.....	105
Students Ability in Completing the Questioning of Analysis with Lesson Study Learning Community.....	106
Scaffolding Learning Community Through The Implementation of Lesson Study in Biology Education Study Program Pakuan University .....	107
IBL (Inquiry-Based Learning) Learning Implementation Through Lesson Study On Cross-Interest Of Biology Interest In Safe 20 Bandung .....	108
The Implememntation of Discovery Learning Method Through Lesson Study To Increase Learning Interest and Learning Achievement .....	109
Implementation of Lesson Study: In Internship Program for Prospective Teacher Student.....	110
Fostering Prospective Teachers' Mathematical Disposition: A Lesson Study in Linear Programming Topics embedded with Technology .....	111
Lesson Study Implementation Using Cooperative Learning Methods in Writing Advertisement, Slogan And Poster Text To Improve Activities And Creativities Of Junior High School Students.....	112

Critical Thinking Ability of Students in Practicum Activities of Animal Physiology Subjects Through Lesson Study-Based Predict, Observe and Explain Models (POE) .....	113
The learning of individual teacher in lesson study collaboration .....	114
Design Of Authentic Assessment Implementation in Lesson Study-Based Learning At Primary School Teacher Education Department .....	115
Application of Pogil Technique through Lesson Study Activities in Educational Management Courses to Increase Learning Activity.....	116
Regeneration of The Makers of The Kite With Characters in Muna District, Sulawesi Tenggara, Indonesia.....	117
Lesson Study in Teacher Education: Preservice Teachers' Perceptions during School Placement Experience in Lampung .....	118
Improving The Quality of Early Childhood Education Teachers Through Lesson Study With Empowerment of Subdistrict School Clusters in Pasuruan District ...	119
Exploring the challenges of collaborative planning in the implementation of LSLC in Micro Teaching.....	120
What Did MGMP based Lesson Study Change in Junior Secondary Schools in Indonesia?.....	121
Integrating STEM Elements through System Thinking using a Lesson Study Approach .....	122
The Perspective of Prospective Teachers in Gazing a Qualified Learning .....	123





**Secondary teachers' mathematical literacy on context-based linear function problem:  
focus on formulating situations mathematically**

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**Abstract**

This paper aims at investigating secondary teachers' mathematical literacy performance on context-based linear function problem primarily on how teachers carried out the early stages of mathematical literacy processes, i.e. formulating the situations of the problem mathematically. Data were collected from responses from 45 secondary mathematics on the problem resulted from individual work within a collaborative learning. Data were analyzed by drawing on the patterns of both correct and incorrect answers corresponding to the extent to which teachers could pass through the 'formulate' process: comprehension and transformation. Results indicate that the teachers' correct formulated situations were found to employ an inductive approach through arithmetical sequence to investigate the pattern of solution of the problem, derive a system of linear equation, and apply a simple logic pointing out the awareness of the existence of constant, independent variable, and dependent variable of a linear function. Meanwhile, the incorrectly formulated situations were indicated to have a failure of inappropriate use of proportional reasoning, in which the constant of a linear function is neglected, double in counting the constant of the function, and apply baseless calculation without any plausible reasons. This study suggests future research on investigating the possible cause of errors as well as recommend a teacher professional development program on developing teachers' performance in the early stages of mathematical literacy processes.

Keywords: Collaborative learning, theoretical and practical context

## **Experiences in the implementation of lesson study for learning: case study in junior high school 13 Palembang**

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### **Abstract**

This study aims to describe the obstacles faced when implementing Lesson Study For Learning Community (LSLC) in junior high school. Lesson Study is a system that has long been applied and developed in Japan. Since a few years back, there have been Indonesian academics who have participated in direct training in Japan. This system can be adapted and applied in Indonesia to improve the quality of education in Indonesia. To be able to realize this, the LSLC socialization and training has been held in several schools in Indonesia. But there are some obstacles to implementing LSLC in schools. Lesson Study consists of 4 stages, namely design-do-see-redesign. In this study focusing on the design phase, where the teacher and researcher jointly compile the learning tools. The research method used is descriptive research method. Data collection is done by participant observation. Subjects in this study were mathematics teachers at Junior High School 13 Palembang. The material used is algebraic. From the results of the study indicate that in the design stage several obstacles occur, including teachers not actively involved in the process of making learning tools and teachers are still reluctant to change conventional teaching habits. But on the other hand, the principal strongly supports the implementation of this system in the learning process in Palembang's 13th junior high school.

Keywords: Lesson Study; Algebraic; Descriptive Research

## **The Level of Students' Cognitive Development through Scientific Approach in Lesson Study on Natural Science Materials**

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### **Abstract**

The level of students' cognitive development is different one another caused by several factors such as the level of their brain maturity and learning environment. The students' learning activities in the classroom will be a stimulus for how they can develop cognitive development through stimulation of teaching and learning activities. The purpose of this study was to distinguish the level of students' cognitive development based on their scientific approach ability. The plan activities were carried out by reviewing the learning plan made by the teacher with the team and observers on the materials. The activities carried out by the teacher referred to the lesson plan (do). The see activities to observe the learning activities that took place. The results showed that the level of students' cognitive development was based on the ability: 1) observing: the elementary students on observation skills on technical, the junior high school students on realistic conceptual, and the senior high school students on theoretical; 2) questioning: the elementary students asked more if there was a stimulus, the junior high school students were more passive in asking questions, and the senior high school students asked if that were not understood; 3) applying: the elementary students did an experiment with simple examples, the junior high school students did more conceptual experiment on the concepts observed, and the senior high school students asked more analytical questions from other sources; 4) reasoning: the elementary and junior high school students gave reasons about conceptual matters, while the senior high school students gave reason with literature comparison; 5) communicating: the elementary school students communicated when there was a stimulating question from the teacher, the junior high school students' communication was based on the role responsibility, the senior high school students' communication was based on the need to acquire something. Based on the results of the study, several factors that can influence the level of students' cognitive development are in accordance with the intellectual maturity of the elementary, junior, and senior high school students such as the learning environment, the teacher's teaching style, the socio-cultural background, and the school academic culture.

Keywords: Cognitive development, scientific approach, lesson study

**How Do Teachers Learn from Their Classes? A Comparative Case Study on Lesson Study Implementation in SMAN 5 Kediri East Java and Teacher Pre-Service Program of the University of Nusantara PGRI Kediri**

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**Abstract**

Lesson study (LS) has been conducted at the University of Nusantara PGRI Kediri as well as at its partner school of SMAN 5 Kediri. LS has brought an encouraging impact for the lecturers, teachers, and principal. A case study was conducted through a semi-structured interview with the teacher team and lecturer team on what benefits have been obtained and how they obtain the benefits. Supporting data for the research was obtained from reflection notes during the implementation of LS. The researcher played role as a participation observer from 2013 to 2018. The research found that the teachers and the principal were more patient in observing the development of student learning as well as they were more aware on what the students face and how the students overcome their learning difficulties. Other findings include LS lecturer team revealed that lecturers were more aware that each student has different ability, and they were more aware on the way of learning and thinking of the students and how to overcome students' learning obstacles. Although there were differences in the aspects found by the teacher team and lecturer team, both gained benefits by directly participating as a model teacher or observer, attending LS more regularly, and listening to what the students' stated during the learning process.

Keywords: teacher learn from their classes, Biology, schools

## **Application of Lesson Study and Entrepreneurship-Based Learning to Improve Lecturer Pedagogic Competencies**

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### **Abstract**

Entering the Industrial Revolution 4.0 the quality of education needs to be improved through the quality of student-centered learning while simultaneously responding to the challenges of globalization that continue to occur in a sustainable dynamic. Innovative development is needed by lecturers through learning. Entrepreneurship-based learning is a process of developing learning from learning devices that have economic value and added value, and Lesson Study philosophy which consists of openness, democracy, excellence of plan, do, see activities carried out in cycles by ten model lecturers. In this study the subject of the application of Lesson Study was ten model lecturers in the FKIP Pasundan University. The research method used is qualitative research methods. The results show that the application of lesson study and entrepreneurship-based learning can improve the pedagogical competence of lecturers from good criteria to be very good criteria

Keywords: lesson study, entrepreneurship based learning, pedagogical competence

## **Teacher's Ability to Use and Develop Learning Media through Lesson Study as A Teacher Professional Development Model**

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### **Abstract**

A lot of ways can be done by the teacher in building student learning communities, including developing learning media. The ability of teachers to utilize and develop learning media directly affects the quality of learning and student learning outcomes. Lesson study acts as an ideal medium to produce effective learning strategies by utilizing and developing thematic wetland-based media. The goals of this study is to describe the ability of teachers in determining and utilizing wetland-based media to build and develop student learning communities. The research method or approach used as a solution offered to solve the problem in this study is the assistance of Lesson Study in the target school, which is SMPN 14 Banjarmasin. The subject of this study were all mathematics teachers at SMPN 14 Banjarmasin. While the object in this study is the ability of teachers to utilize and develop learning media by utilizing wetland-based media. Data collection techniques that used are observation and interview. The results showed the following: (1) In the preliminary activity, the teacher was less creative in utilizing learning media related to apperception and motivation activities as an inspirational media to build student learning abilities. Teachers have tried to facilitate the students to interact through teaching props as media, but was unable to make students actively participate. (2) In the core activities, the teacher was less innovative and creative in utilizing and empowering various types and forms of media as a learning resource for students, however, the teacher was able to choose the right teaching props as a learning media for students and strive to build student learning skills through the teaching props. However, the teacher was still unable to use the media as a tool to develop student learning abilities. (3) In the closing activity there was no effort made by the teacher to build students learning abilities, because the teacher did not do self-reflection related to the abilities that students successfully master.

Keywords: learning media; lesson study; development model

# **The Implementation of Project-based Learning for Independently Designing Learning Resources to Improve Student's Comprehension on Biology Concepts through Lesson Study in Senior High School Agni**

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## **Abstract**

Making use of learning resources to support instructional activities constitutes one of teachers' efforts to facilitate students' comprehension. By and large, learning resources have been prepared by teachers and/or avaiably existent in schools. The challenge is that not all learning resources are made available covering all materials. Accordingly, it is of urgency to assign students to create learning resources of their own by incorporating numerous references and learning needs. These sorts of activities, elaborating and designing learning resources, have been implemented through Project-based Learning (PBL) model within the framework of Lesson Study (LS). PBL was implemented by one model teacher undergoing four cycles for teaching three biology materials in Grade XI of SMAN Sumberpucung Malang. There were a number of LS observers, comprising three teachers and three lecturers. This current LS recruited two students per cycle as the informants for tapping the data about instructional activities and designing learning materials. This current LS has revealed some findings and proposed some fruitful inputs for teaching biology in Senior High School particularly Grade XI, namely: (1) the students have been equipped with the competence to accomplish a project for collaboratively designing learning resources of their own within the following steps: elaborating literatures, taking into account learning needs, as well as presenting their outcomes before class; (2) it took six days for the students to elaborate and design learning resources outside classroom meeting hours; (3) the syntax of PBL has been found to be more effective as it has been reduced into five stages instead of six stages, excluding monitoring stage; and (4) the instructional activities have been declared to be effective on the bases of quantitative indicators as follows: 100% students actively involved in elaborating and designing learning resources; 89% students have comprehended biology materials and concepts prior to classroom meeting sessions, and the students' comprehension on biology materials has been shown to eventually increase by 65%.

Keywords: learning resources, comprehension on concepts, project-based learning

## **Developing the Design of Learning Activities to Improve Problem Solving Abilities for Children Aged 5-6 Years**

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### **Abstract**

This research was conducted on the fourth theme at GagasCeria Preschool for children aged 5-6 years. The content of the theme focuses on children's problem solving abilities in solving a problem. To accommodate this, the teacher made a project with children, namely animal rescue missions in Zoozical zoos. After reflecting on children's activities, the teacher found that the child had not managed to solve the problem. The teacher then provides more specific stages to help the child identify problems. In addition, supporting aspects were added to help the effectiveness of children's activities such as time display, wind effect, narrative story, etc. considering the age of children who are still in concrete operational stages (Piaget, 1960). After taking corrective steps, children's problem solving abilities develop, indicated by changes in how to save animals. They can complete the mission on time. In addition, each group can also show good cooperation. Children can respect each other and accept the advice given by their group friends.

Keywords: Problem solving, preschool project, cooperation



## **Improving students' scientific communication skills through increased online learning activities in preservation course**

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### **Abstract**

The need to improve students' scientific communication skills keeps growing, in line with academic demand. This goes hand in hand with the characteristics of Preservation course which deals not only with the theoretical concept but also with fostering the abilities to conduct preservation procedures. The availability of online resources owned by Universitas Pendidikan Indonesia at Integrated Online Learning System (SPOT) learning management system (LMS) gives the opportunity to prepare the requirements through online learning activities. By using an action research method with three cycles, the online learning of Preservation course was conducted by employing blended learning in which the materials were delivered face to face while discussion and assignment were carried out online. These processes were conducted one after another according to the characteristics of the materials and the targetted learning outcomes. The results showed that after three cycles, there was an improvement in students' scientific communication skills in the aspects of elaboration, originality, and flexibility.

Keywords: scientific communication skills, online learning activities, Preservation course

## **Doing Role Play to Enhance the Understanding and Skill of Students**

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### **Abstract**

Ideally, students were not expected only have conceptual knowledge in understanding a course, but also the practical knowledge in order to be able to apply the skill in improving their capacity as individual and their contribution in the community as a part of society. Role play as a learning method could facilitate the enhancement of conceptual knowledge understanding, as well as the improvement of skills in doing a community assessment. The experiential learning approach by role play encouraged students to participate actively in class and gaining the new skill. The method in this study used participatory observation and behavior checklist. Narrative writings and descriptive statistics will be used to analyze the data. The result and discussion will focus to explore the learning process in the class from observer's perspectives, as well as the pre-post test of the behavioral checklist in playing the role of community assessor and participants.

Keywords: Knowledge; Learning; Role Play; Skill

## **Effectiveness of Formulation of Questions on Lesson Study Activities in Gagasceria Preschool**

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### **Abstract**

Question formulation is one of the most important and most creative parts in education according to Piaget (in Dahar, 1996). In the lesson study session this year, Gagasceria Preschool made a formulation of questions that illustrate the problems that want to be explored through the lesson study series. Before the lesson study activities, the questions were determined based on mutual agreement through a discussion and field analysis process. With this question, lesson design is more directed and profound. Besides influencing the lesson design, the formulation of questions also affected the activities of the Post Lesson Discussion. In the Post Lesson Discussion session, questions were asked based on the formulation of the questions at the beginning of Lesson Study so that the discussion session was sharpened, because giving questions was something that was useful to explain and broaden the thinking (Sund & Carin, 1978). the results of the lesson study can provide data and facts for improving the school curriculum. In the lesson study activities at Preschool Gagasceria, this is not only as a medium to inspire and learn from the teacher but also as a medium to evaluate the sustainability of the school curriculum.

Keywords: Formulation of questions, lesson design, post lesson discussion, curriculum evaluation

## **Editing Indonesian-language manuscripts**

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### **Abstract**

This study uses an ethnographic approach. This study aims to produce several findings relating to the in-depth description of (a) the process of editing Indonesian-language manuscripts, (b) the relationship between the authors, editors, and publishers of Indonesian-language texts; and (3) linguistic and non-linguistic aspects in editing Indonesian texts. These findings can be used as teaching material in developing Editing lectures. To improve the ideal Editing course, modeling needs. Modeling can be done by conducting a study of the publishing process in established publishing institutions and has publishing achievements both in quality and quantity. Through this ethnographic research, the editing process; linkages between authors, editors and publishers; and linguistic and linguistic aspects in editing Indonesian-language manuscripts can be clearly described. The final stage of this study is the preparation of Editing teaching materials that can be used in study programs that have Editing courses.

## **Pupils' Intra-dialogue in the Context of Problem Solving Polyhedron Geometry: Phenomenological Studies**

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### **Abstract**

The research aims to describe pupils' intra-dialogue during learning polyhedron. It developed design based on learning obstacle. In didactical obstacles are found problems of conceptual interrelation, thinking continuity, and limitation experience of pupils in the polyhedron concept. So, The researchers designed a didactical design to minimize the learning obstacle by creating a more organizer and solve learning trajectory. The design implementation done on the pupils of grade VIII in Bandung during 3 continuous meetings. The researches using phenomenological studies to uncover pupils' experience. By using Nonaka theory, the researchers found the pupils' knowledge conversion. The results showed the pupils' intra-dialogue system in solving the polyhedron geometrical problem of phenomenological studies.

Keywords: Dialogue, didactical design, phenomenological studies, polyhedron, and problem solving

## **Exploring Learning Support Pattern during Lesson Study on Science Lesson with Lesson Analysis**

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### **Abstract**

This article reports on a descriptive analysis on the shifting of learning support pattern during lesson study cycle. Learning support is a relief (in the form of information, emotional support, explanation, teaching media, teachers question, explanation and teaching material) that given as a result of interaction between teacher-student or student-student during lesson. Learning support pattern is a graphic imagery that display the patterning of learning support produced by teacher and student during lesson. The pattern consists of nodes that represent the actor (student and teacher). The nodes have different size depend on the number of learning support given by the actor. By analyzing learning support pattern, we can conclude weather the lesson was teacher centered or student centered and have democratic social environment or not. Utilizing data from three set videos of Lesson Study cycle on Science Lesson. Data collected in this study are transcript of plan session, transcripts of research lesson, transcripts of post lesson discussion, learning artefact and researchers' field notes. The transcripts of research lesson are analyzed qualitatively using lesson analysis framework. The result indicated that 1) post-lesson discussion affect to teachers' initiative in organize learning support 2) teacher support (in the form of teaching media, teachers' question, teachers' response, teaching material and learning task) affect to students' contribution in providing learning support.

Keywords: Learning Support, Lesson Study, Lesson Analysis, Science Lesson

## **The Development of Lesson Study for Learning Community Through LSLC Club in Universitas Mataram**

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### **Abstract**

Lesson study for learning community (LSLC) is an approach on enhance teaching and learning process and educator professionalism collaboratively based on the principles of collegiality and mutual learning to develop a learning community. It has been successfully applied in many places in all over the world, Indonesia is one of them. Universitas Mataram, one of University in Indonesia located in West Nusa Tenggara is active in implementing lesson study both inside and outside the campus, such as applying in classes, conducting research and disseminating the results in workshop, seminars or schools. However, there are some that need to be upgraded and optimized, one of that is to involve students directly in the practice and development of LSLC itself. Based on this, in 2017 the author initiated the formation of the LSLC Club which attended by PGSD students, FKIP UNRAM from various generations. In several meetings held every week, students have been introduced to the concepts and nature of LSLC, the procedures for implementing, the preparation of lesson design, having the experience of being actively involved as observers and participating in reflection activities. Based on these activities, students involved in this club are expected to live the spirit of the LSLC and become a pioneer in implementing LSLC at school later. Thus, improving the quality of educational processes and outcomes can be achieved.

Keywords: lesson study for learning community, LSLC Club, student

## **Lesson Study in The Implementation of Adapted Physical Education as Clinical Didactics**

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### **Abstract**

Teaching adapted physical education needs a new paradigm. It is not only about sport socialization concept, but also as a form of caring and curing the student disabilities to be humans in nature. A group of adapted physical education teachers was asked to plan and organize their teaching program in the form of lesson study which consisted of three steps: reflection number one, physical activity, and reflection number two. Teaching student with disabilities needs a clinical didactical in the qualification of standard competencies as researcher, teacher, and therapist.

Keywords: Lesson study, adapted physical education, special need students



## **Lesson Study and Its Role towards Magang III FKIP (Faculty of Teacher Training and Education) at Cokroaminoto Palopo University: Value and Guidance**

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### **Abstract**

The objective of this study is to describe the role of lesson study activity towards Magang III especially for the students who as a pre-service teacher of Faculty of Teacher Training and Education at Cokroaminoto Palopo University. They are expected to be a good and professional teacher. Theoretically, lesson study is designed as internal quality assurance to pedagogy competence of teachers. This idea becomes a fundamental of Magang III based lesson study as an internship teaching program at Cokroaminoto Palopo University. The result of Magang III based lesson study shows that there is a form of a value or value of system in there. This value appear on the relationship among pre-service teachers, their lecturer and also observers during designing the lesson plan which is done before they taught in the classroom. Based on this paradigm, it explained that lesson study is not only about the mechanism or a value of system, but also related to the collaboration. Collaboration relates to the three items, such as plan, do and report. These three of collaborations can facilitate the pre-service teacher in planning their teaching learning process in the classroom, as example, it can train their mental to develop their skill. Those processes show as a guidance which appear from the result of interaction between pre-service students and lecturer.

Keywords: *Lesson Study, Value, Magang III.*

## **Improve Probability Learning Activities using Think Pair Share through Lesson Study for Learning Community on FKIP UNIPA**

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### **Abstract**

The purpose of this Lesson Study activity is to improve the learning activities of probability instruction by focusing on students' ability to provide their knowledge and skills. This study used Think-Pair-Share, a cooperative model in designing the instruction. Students were paired in groups of two students. The groups of two students then were randomly grouped in bigger groups; groups of three then groups of six. Bigger groups were formed after the smaller groups finish discussing and doing the teacher's assignments. The discussion was regarding about set theory and counting rules using video. The instruction process was arranged in two cycles in two parallel classes. From the first reflection, the teacher was suggested to use more real case of examples to build students' understanding of concepts. Teachers are also advised to ask more questions and pay attention to students who are less active. This study showed that students were more active during the class. It can be seen from the more relaxed learning atmosphere where students were more assertive and involved in classroom activities. Students are more capable to ask questions, provide objections, and make corrections.

Keywords: Probability. Think-Pair-Share; Lesson study

## **Policy Implementation on Educational Reform Developing Student's Professional Skills through Lesson Study Coaching and Mentoring to Build a Professional Learning Community**

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### **Abstract**

The Higher Education Commission recognized the need to reform basic education in all areas of Thailand in order to prepare students to be ready to pursue their careers. Higher Education Institutions were encouraged to take responsibilities for developing education, improving local areas, and providing professional skills for students. Faculty of Education, Chulalongkorn University, as the head of Upper Central Higher Education Development Network, started a project aimed at developing student's professional skills through lesson study, and using coaching and mentoring to build a professional learning community. The project took place in Nakorn Nayok province. The objectives of the project were 1) To increase professional skills, entrepreneurial skills, and innovation skills, 2) To strengthen schools to be able to fulfill the needs of the community and educational reform. 3) To develop heads of educational institutions and teachers to be able to coach and mentor. Participants in the project were the faculties, principals and teachers from schools in Nakhon Nayok province. The teacher coaching and mentoring programs have been developed through the processes below: 1) Formed a team and network to consult with heads of educational institutions and made an operation plan in response to the need of schools to develop professional skills for students. 2) Conducted a career needs assessment survey by the end of academic year 2017 and before conducting the work shop. The survey had to include: (1) Careers students intended to pursue, (2) Careers parents intended for their children, (3) Careers teachers suggested, (4) Careers in high demand at the present, and (5) Careers in high demand in 10 years. 3) Monitored and supported teaching and learning by coaching and mentoring programs. The faculties and schools had collaboratively made an operation plan once in May, coached and monitored twice in June, and monitored the classrooms in July. 4) Organized feedback reflection dialogues activities with teachers and students focusing on plans of developing professional skills through coaching and mentoring system within 3-cycle of Lesson Study of teachers in school (Recording and reflecting the results of the students and teachers directly, After Action Review : AAR) 5) Regulated teaching and learning schedule to help students develop professional skills. 6) Collaboratively conducted symposium by school principals and the faculties to exchange their experiences and lesson learned. The result of the project that took place in Nakhon Nayok province showed that the student's professional skills, through lesson study and coaching and mentoring to build a professional learning community, were organized systematically, developed, and well-facilitated collaboration. Therefore, there was an increased instructional learning community leadership. The detailed findings are listed below: 1) After work shop, the results were well analyzed for teachers to be able to plan

their teaching strategies in response to student's background and interest. 2) The work shop has resulted in developing characteristics and skills needed for the careers. Students were more awareness of professional skills and careers that would be beneficial in the future. 3) Both school principals and teachers learned how to build professional learning community by using PLC (Professional Learning Community) as a tool to operate. 4) Each leading coaching team from university shared lesson learnt together. In conclusion, the schools that implemented the Lesson Study and Professional Learning Community Coaching and Mentoring program enable teachers in charge of the processes to have chances to learn new things and also help students get professional skills. It was good for teachers to plan their teaching strategies to correspond with preferences and aptitudes of students. Moreover, student's benefit was being able to continue their ambition and develop learning culture of their own, so that they could grow up into great adults and bring great future for our nation. Furthermore, the faculties also got valued knowledge and experiences which can be used to develop their curriculums in response to the needs of students in the future.

Keywords: Lesson Study; Reform; Professional Skill; Professional Learning Community; Coaching and Mentoring

## **Collaboration of TPACK (Technological Pedagogical Content Knowledge) Biology Learning Tools in Assessing Student Activities Trough Lesson Study in Senior High School Pasundan 1 Bandung**

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### **Abstract**

This study aimed to describe student activities during collaborative learning based on TPACK in Senior High School Pasundan 1 Bandung. Collaborative Learning tools developed in the form of lesson plan, teaching materials, worksheet and multimedia animation based on TPACK. The instrument developed was an instrument of student activity during learning. The method used is "Quantitative Descriptive" involving 38 students of class X in Senior High School Pasundan 1 Bandung. The results of data analysis show 1).The interaction between the teacher and students, between students and students or between students and Multimedia animation in the category is very good with a mean value of 3.45, 2).Student learning activities are seen from the teacher's efforts in conditioning learning that supports student activities in the good category with a mean value of 2.98, 3).Student learning activities during the teaching and learning activities in the class are in the good category with an average score of 3.00, 4).Student activities in the evaluation process and the utilization of learning that is done after attending the learning process in the class in the good category with a mean value of 2.75. Collaborative learning tools as a whole improve student learning activities to be more meaningful and complete. In particular teacher collaboration with lecturers in creating learning can improve the quality of effective and innovative learning.

Keywords: Student activities, Biology Learning Tools, Technological Pedagogical Content Knowledge (TPACK).

## **Implementation of Google Classroom as Media in Elementary School Teacher Education Universitas Pasundan**

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### **Abstract**

The aim this study are the using of google classroom as media learning students of Elementary School Teachers Education at Universitas Pasundan. The use of media in learning is very important to achieved the explicit learning objectives in lesson design that have been made by lecturers. This study to get an overview in the second semester of Academic Year 2018/2019 which are applied to the Learning Strategy subject in elementary school. Subjects were all students of PGSD semester II in Class D, amounting to 40 people. The implementation of this research is in the form of a cycle consisting of plan, do, and see. The data collection technique uses interview, observation, and survey methods. So, the data processing techniques to measure the validity of research data using triangulation techniques. Based on data analysis, the results of the study can be concluded that the use of google classroom media in students Elementary School Teachers Education at Universitas Pasundan are carried out in accordance with the stages of plan, do, and see. The existence of these stages challenges the lecturers to design learning as interesting as possible so that the quality and results of the learning process will increase and demand that the lecturers continue to innovate learning in order to support the improvement of their professionalism as educators. quality of effective and innovative learning.

Keywords: google classroom media, Student Centered Learning (SCL), dan Learning Strategy in Elementary School

## **Effective Area Arrangement for Classes 2-4 years old**

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### **Abstract**

The main problem in the GagasCeria Playgroup related to area arrangement is how to make effective activities in the area for 2-4 year old classes so that it can become an accommodative container for learning activities. This is one factor that supports the success of learning programs. The purpose of this Lesson Study activity is to find and find a strategy in providing an effective area for 2-4 year age classes in order to increase children's deeper interest and exploration abilities. Lesson Study activities are carried out as much as 3-4 times and the main discussion is related to variations in the arrangement of the playing area in the GagasCeria Playgroup. It turned out that after being studied, it was not only the variation in the arrangement of the playing area, but the number of areas also affected the effectiveness of activities including the deeper interests and abilities of children's exploration for the 2-4 year age class. Will it be more effective if only 2 areas with material tools vary for 2-4 years old?

Keywords: area arrangement, deep exploration, age 2-4 years, lesson study

## **Students' Representation of Addition and Subtraction**

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### **Abstract**

Addition and subtraction are two operations which are interpreted as simple and straightforward. In fact, we often make mistakes when adding or subtracting something. Furthermore, all this time the discussion about addition and subtraction in textbooks that are widely used in schools mostly does not yet have an illustration of the counting process that can help children's understanding more deeply. This research departs from a sense of curiosity about what is in students' thinking and aims to see how they express (their representation). Through this research, we can learn from the children together from their teachers about what we consider easy so far. Not to complicate things that are simple, but to pay more attention so as not to be missed.

Keywords: Representation, addition, subtraction



## **Improving Listening Skill Using Collaborative Learning Methods Through Lesson Study**

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### **Abstract**

We conducted research in the 4th grade of Soekarno SD GagasCeria in Bandung City. The initial state of Soekarno's 4th grade students was the difficulty in listening skills in every learning activity. They are less able to focus on listening to information, either from their friends or from the teacher. On this basis, we conduct research in this class to find out more about the causes and efforts to improve students' listening skills. The method used is collaborative learning where children will interact with each other in dialogue or sharing information with friends. We carried out two lesson study cycles in the class, namely in the subjects of Islamic Religion and English. We do grouping consisting of 4 people per group. Each individual is given a lot of thinking tools in the form of lotus diagrams to record important things they get when they watch a video. Every session, the teacher gives a time limit so that students can focus on their assignments. Next, the teacher wrote four pieces that were liked by students. Each student must choose one of the fruits and in each group no one chooses the same fruit. The teacher will name one of the fruits. When mentioned, students who choose the fruit must share information obtained from videos that have been watched to friends in the group with the aim of being able to complete information that has not been written. So on until every student in his group gets the opportunity to share. At this stage the teacher also sees the listening skill process of each group. At the end of the discussion, the teacher chooses the representative of one student from each group with the fruiting method to explain the results of the discussion with the group. Meanwhile, the teacher also wrote down the information the students explained on the board. From these activities, it was seen that Soekarno SD GagasCeria 4th grade students were able to show their listening skills well. There is a process of speaking and listening in each group that is organized with sufficient time and good strategy use

Keywords: lesson study, listening skill, learning strategy

# **The Implementation of Lesson Study Using Discovery Learning Model and Constructivism Students' Worksheet on Relations and Functions Material in the Seventh Grade**

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## **Abstract**

The mastery of material concepts is the most fundamental point in learning mathematics. Mastering the right concepts will make it easier to learn the next material, so it is needed the depth and well concepts mastery. Based on the results of observations and interviews at Muhammadiyah 9 Junior High School of Semarang, it can be concluded that the students' difficulties in relation and function material are: 1) students cannot distinguish between relations and functions, 2) Students have difficulty in giving examples of functions and non functions, 3) The implementing functions in solving problem. Responding to the existing problems, we need a learning model that can provide opportunities for students to find concepts independently. Learning models that can be applied to overcome problems are discovery learning model. In order to the application of discovery learning is more maximal, it is necessary to be assisted by constructivism-based worksheets. The purpose of implementing lesson study is to improve the understanding of the concept of relations and functions. This study used a qualitative approach collaborated with descriptive analysis method. ) defining functions, 3) explaining relation and function, 4) distinguishing between relations and functions, 5) giving examples of relations and functions. The results shown that there is an improvement on the ability of understanding concepts about relations and functions.

Keywords: Concepts Understanding, Constructivism Discovery Learning, Lesson Study

## **Lesson Study-Learning Community Materials of The Least Common Multiple in SDN 1 Junrejo Kota Batu-Malang**

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### **Abstract**

This study aims to describe the application of lesson study-learning community in the material for the least common multiples in the Junrejo Elementary School I of Batu-Malang City. The type of research used is descriptive. Subjects were teachers and students of grade IV. The teacher at SD Junrejo I who became a model and observer teacher. The selected students are fourth grade students. A. Teachers and students apply lesson study learning community with stages of plan, do, see. Stage plan, the teacher designs the chapter design and lesson design, Stage do, the model teacher implements learning. Stage see, a reflection is conducted between the model teacher and the observer. Data were analyzed using qualitative descriptive. The results show that 80% of teachers and students like the application of lesson study learning community. Findings: Lesson studies express what students think and learn in a fun process

Keywords: Lesson study-learning community, Least Communion Multiples, SDN I Junrejo

**Jigsaw cooperative learning in increasing motivation and learning outcomes of class XI  
IPS students 2 SMAN 5 Mataram school year 2016-2017**

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**Abstract**

Geography subject to class XI IPS is oddly one topic of study material in the condition of the Indonesian territory as a maritime axis. During this time most teachers in teaching this subject still use one-way learning direction, such as a lecture method, thus making students feel bored. Here is an evidence that there are still students who have not been able to reach KKM. Therefore, it should be a paradigm shift in studying the teaching and learning process and interaction between students and teachers and considering students' creativity. The purpose of this study is to determine to increase motivation and learning outcomes of class XI IPS 2 SMA Negeri 5 Mataram 2016-2017 school year. It becomes the axis of this research is classroom action research (CAR) which is carried out in two cycles each cycle consisting of planning, implementation, action, observation, and reflection. The subject of this research is observation, tests, and questionnaires, for interview and documentation data collection techniques by using qualitative and quantitative descriptive analysis techniques.

The results showed that there is an increase in motivation and student learning outcomes in implementing a jigsaw type learning cooperative learning model for students of class XI IPS 2 Mataram 5 Public High School in the academic year 2016-2017. It is concluded that the increased motivation and learning outcomes of students from cycle I to cycle II, learning motivation in each cycle, among others: cycle I. Student learning motivation (7.50%) criteria both increases to (87.50%) criteria are very good at cycle II. in the pre-action learning outcomes of students showed an average of 78.20 increased to 81.05, and increased to 88.50 in cycle II. The jigsaw cooperative learning can improve motivation and learning outcomes of class XI IPS 2 SMA country 5 Mataram school year 2016-2017.

Keywords : Jigsaw Cooperative Learning, motivation, learning outcomes

## **The Role of Teacher-Lecturer Collaboration In Learning Method Development**

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### **Abstract**

Learning quality is a series of activity stages consisting of learning plan, implementation, and evaluation. Through collaboration, learning processes complement each other and provide reinforcement so that the academic atmosphere is formed. Learning process and teaching/ learning are well-implemented in which all components are involved and experience behavioural changes. The ultimate goal in classroom learning is to answer the needs of students in dealing with the dynamics of the problems at hand. Given the teachers as the people who meet students every day, the teacher's role becomes very strategic. Continuously, teachers must make changes in learning with a variety of new innovations including the choice of learning methods. The spearhead of learning activities is a change in student behaviour, so a teacher must have creativity and innovation in the selection of learning strategies including the methods. The hope is that learning will be more meaningful. Through teacher-lecturer collaboration, there will be an increase in the development of more varied learning methods in order to improve the quality of learning. The purposes of this article were: (1) to identify the extent to which the collaborative role of teacher-lecturer can improve the quality of learning, and (2) to find out how the process of learning method development is carried out. This research methodology: the teacher-lecturer collaboration in the development of learning methods was carried out in the High Schools of SMA Negeri 15 and SMA Muhammadiyah 1 Semarang in the subject of Chemistry. The research method developed was qualitative with qualitative-descriptive analysis technique. The data collection technique used interviews and discussions, documentation and field notes, and Data Triangulation approach. The conclusion are: (1) The Teacher-Lecturer Collaboration was carried out in the planning: composing the Lesson and Chapter Designs; learning in each class as both teachers and observers; and conducting reflexion together. This collaboration had provided many benefits that led to the improvement of learning quality. (2) The process of learning method development was carried out in several stages. The R&D stages consisted of: (a) Analysis, (b) Design, (c) Demonstration, and (d) Implementation. These activities resulted in an activity analysis used as the basis for compiling and establishing learning methods and trying them before they were implemented.

Keywords: the role, collaboration, development, learning method

## **Improving Junior High School Students' Independent Learning through Learning Community Model**

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### **Abstract**

This research is aimed at improving Junior High School students' independent learning through learning community model. Besides, this research is aimed at giving an alternative solution to encourage the students' to give opinion, answer question and share their thought. Action research was used to conduct the research. The data were taken from the analysis of the learning process. Through learning community the learning process was done by the following the "plan, do, see" steps. In plan, chapter design and lesson design are developed. In do, the activity of pre, whilst and post reading are conducted and observed by some observers. In see, the reflection was done to evaluate the finding about how the were learning. Learning Community models' was successful in improving students' independent learning. It can be proven by the students' anthusias in receiving information, solving the problem and sharing knowledge among them.

Keywords: Learning Community, Independent Learning, Lesson Study

## **Pre-Service English Teachers' Experiences in Learning through Lesson Study**

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### **Abstract**

English Education Study Program needs to prepare pre-service English teachers with experiences that may assist them to develop their knowledge for teaching English. This research was based on qualitative design which explores pre-service English teachers' perspectives on acquiring knowledge of pedagogy in learning through Lesson Study. 34 students of English Education Study Program of Teacher Training and Education Faculty from 8 semester participated in this study by submitting reflective notes that answer four questions concerning advantages, challenges, lesson learned, and inhibitor factors of their experience learning through Lesson Study in the class. Through content analysis, data analysis results showed the pre-service English teachers' positive responses to the employment of Lesson Study in enriching their pedagogical content knowledge. Pre-service teachers responded that Lesson Study provided an opportunity to extend their knowledge of how students learn encompassing ways to transfer subject matter; enriching teachers' knowledge of learners, and general pedagogy in accordance with the effective way of teaching English.

Keywords: Lesson Study; Pre-service English Teachers; Pedagogical Content Knowledge.

## **Development of Lesson Plan Through Collaborative and Reflective Learning For Students of Teacher Candidates**

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### **Abstract**

The purpose of this study is to investigate the ability of prospective teacher students in collaborative learning plans and based on peer reflective discussion. This activity was carried out in the micro teaching course of the physics education study program for the 2017/2018 school year with seven students participating. This research was carried out based on analysis of learning videos, interviews, observation sheets, learning tools produced and student discussion minutes. The criteria used in the preparation of learning tools are knowledge of teaching materials, clear needs analysis, relevance to the curriculum, systematic. Based on the results of the study obtained an increase in skills in preparing learning plans based on analysis of students' content and needs and curriculum. So that lectures through peer and collaborative reflection activities need to be improved regarding deeper reflective discussion. Continuous coaching with system support in the next program can provide opportunities for students to train reflective and collaborative skills in developing learning plans.

Keywords : Lesson Plan, Micro Teaching, Collaborative And Reflective Learning



**The Implementation of *Learning Cycle 5e Models* on Structure and Function of Plants to Improve The Ability of The Second Year of Student Junior High School 21 Pekanbaru in Scientific Literacy**

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**Abstract**

This study aims to improve student's scientific literacy skills by using *Learning Cycle 5E models*. The treatment was conducted collaboratively in learning structure and function of plants using lesson study phases involving by Biology lectures, pre-service teacher, and the science teacher of Junior High School 21 Pekanbaru in August 2018. The focus of the observation was on scientific literacy and learning activities of students individually and in groups. Science literacy including science knowledge, procedural and epistemic was measured through work sheet, aspects of explaining scientific phenomena, evaluating and design scientific investigations, interpreting data, and the evidence were measured using an assessment sheet performance. Curiosity, scientific argumentation and environmental awareness were measured using the observation sheet. Learning activities carried out inside and outside the classroom had a positive impact on literacy skill science. The data showed the students individually or in groups could answer questions in the work sheet, more active, enthusiastic and more curious when observing, identifying and grouping plants using direct objects in the school environment. Some questions that arise from students are among others when identifying corn and carrot plants about vegetative and generative structures. Overall the implementation of *Learning Cycle 5E models* can improve students' scientific literacy in learning science at Junior High School 21 Pekanbaru.

**Keywords:** *Learning Cycle 5E, scientific literacy, junior high school*

## **Lesson Study as a Pedagogic Development of Teachers and Lecturers for Improving The Quality of Learning and Improving The Quality of Students Learning**

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### **Abstract**

Learning process is a very essential factor in achieving educational goals, not only as an effort to improve quality that focuses on the past and the present, but it should be a process of anticipating the quality of education in the future in preparing the quality of learning in developing students thinking skills, interpersonal skills, good adaptability. The purpose of reseach was to find out how to develop professional attitudes, pedagogic knowledge and competence among teachers and lecturers, and to know how to develop the quality of learning as the creativity of teachers and lecturers in improving the quality of learning of students. This research is a descriptive analytic study with using purposive sampling in universities and junior high schools. The results show that Lesson Study is a model for educating professional development through collaborative and ongoing learning assessment based on the principles of collegiality and mutual learning to improve the quality of learning and build learning communities. Enhancing Knowledge content and Pedagogical content is obtained through several processes, starting from the process of compiling a learning design (lesson design) that can predict students' responses, to the careful reflection process by comparing the lesson design arranged with the learning process that occurs.

Keywords : Lesson Study, pedagogic competence, quality of learning, quality of learning

**Model teachers perception on the feasibility of chapter designs in their open class activities (a case study) In the learning process, teachers and lecturers use a lesson plan. Unlike the common learnin**

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**Abstract**

Model Teachers Perception on the Feasibility of Chapter Designs in Their Open Class Activities ( A case study) In the learning process, teachers and lecturers use a lesson plan. Unlike the common learning process in Indonesia, lesson study activities generally use a chapter design that has been made together by a team. This study was intended to find out the opinions of the model teachers and lecturers about the feasibility of the chapter designs compared to the Lesson Plan / RPP they usually use. The research subjects of this study were 2 teachers who had conducted open lessons and 4 lecturers who had also become models in the open lesson activities at campus. This research was a qualitative research with the characteristics of a case study. Data collection techniques used are observation, interviews, and documentation. The data then codified and triangulated. It was found that the teachers and the model lecturers felt more comfortable in using chapter design in carrying out the teaching process because the chapter designs were able to provide clear learning process guidelines. The learning outcomes, initial activities, core activities, closing activities , and the jumping task are clearly mentioned and displayed. Trajectory lines can help them in determining the activities of learning and the scaffoldings needed when the learning process is not in line with expectations. Keywords: chapter design, lesson study, teachers' and lecturers' perception.

Keywords : chapter design, lesson study, teachers' and lecturers' perception

## **Application of Lesson Study and Its Influence to Understanding University Student Learning**

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### **Abstract**

The title of this study "Application of Lesson Study And Its Influence To Understanding university Student Learning". The purpose of this study is to determine the application of lesson study and understanding of university students' learning and to know the effect of lesson study on the understanding of university student learning in learning subjects office management. The research method used in this research is survey. Subjects in this study were university students 2017 of class C which amounted to 38 students. Data analysis used is data verification analysis through mean calculation (mean) score with SPSS release 21.0 for Windows. Result of research of recapitulation of average score of responder responses about lesson study equal to 3,82 included in good category, meanwhile comprehension of university student learning equal to 3,82 included in good category, hence can be concluded that responses of respondent to lesson study and learning comprehension "Good". Based on data analysis that has been done then obtained the results of research influence the implementation of lesson study is the coefficient of determination R Square of 0.581. It is stated that variable X has an effect of 58.10% to variable Y and the remaining 41.90% influenced by other factors. Factors that give effect to the variable Y as much as 58,10% caused by indicator of variable X in the form of purpose, function and benefit of lesson study. The conclusion of the research can be accepted, as the end of the research, the authors convey the suggestion as a consideration for teachers, schools, and university to apply lesson study learning in the process of learning on office management subjects are also adapted to the learning materials. To improve university students' learning comprehension, educators can apply various innovative learning media and delight students so they can improve their learning comprehension

**Keywords:** Lesson Study and Understanding University Student Learning

## **Piloting School of Lesson Study: School Potential and Stakeholder Support in Digital Information Era 4.0**

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### **Abstract**

Lesson study in Kota Batu has been carried out since 2016 at five piloting schools, namely Elementary School 1 of Junrejo, Elementary School 1 of Ngaglik, Muhammadiyah Elementary School 4 of Batu, Muhammadiyah Junior High School 8 of Batu and Junior High School 1 of Batu. The products produced from these activities include lesson plans, lesson design, learning media, documentation in the form of photos and learning videos. The product is potential information that can be used by relevant stakeholders in order to increase support to realize better quality learning. On the other hand, the involvement of various stakeholders in building quality education is a must. The presence of a digital-based information era can be use as a tool to increase stakeholder involvement. This study aims to explain how the potential and form of support provided to integrate lesson study with information technology. The results of this study used as the basis for developing a lesson study digital information system model in Batu City.

Keywords : lesson study, piloting school, stakeholders, digital information

## **Piloting School of Lesson Study: School Potential and Stakeholder Support in Digital Information Era 4.0**

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### **Abstract**

One of the mandates of the 2015-2019 Ministry of Research and Technology's Renstra is to improve the quality of learning and student affairs in universities. To guarantee a quality learning program, Permenristekdikti Number 44 of 2015 Article 10 paragraph 2 and Article 11 mandates that the learning process must fulfill characteristics that are interactive, holistic, integrative, scientific, contextual, thematic, effective, collaborative and student-centered, so it is very important to do lesson study activities in the Mathematics Education Study Program, English Language Education and Economic Education at FKIP UMN Al Washliyah, so that the quality and quality of learning can be improved. Lesson study activities begin with the workshop activities in September 2017 and end in December 2017 with the seminar results from the open lesson. The target is 45 FPTK lecturers. Lesson study can be implemented in learning through the plan-do-see cycle with six stages, namely forming a lesson study group, determining the focus of the study, planning research lessons, implementing learning and observing learning activities, discussing and analyzing the results of observation, and reflection and refinement. The stages of the lesson study activities can facilitate the improvement of the quality of the learning process and student learning outcomes. The ongoing lesson study implementation will help lecturers accelerate their professionalism.

Keywords : Lesson Study, Universitas Muslim Nusantara Al Washliyah, Learning Quality

## **Using Lesson Study for Learning Community for Developing the Capability of Biology Education Students through Action Research in Education Course**

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### **Abstract**

Capability development of postgraduate (S2) students as prospective lecturers of biological education is carried out through the use of Lesson Study for Learning Community in even semester of 2017/2018. The aim of the study are teaching Life-based learning and improving the teaching and learning process quality of the Action Research in Education course, which is one of the elective courses. The research method uses a qualitative descriptive model by describing what is done in classroom learning. The subjects of the study were 13 postgraduate students participating in the Action Research in Education course. Students are divided into 4 groups that function as Lesson Study Teams (LS). Each group carried out 3 lessons in peer teaching by choosing a learning model suitable for teaching assigned material. Data collection is carried out through the assessment of the implementation report of Lesson Study, the results of reflection in the Learning Journal, Lesson Study results articles, and End Semester Questionnaire. The results showed that Biology Education postgraduate students could be taught to form professional learning communities and choose learning models to develop 21st century life skills of themselves and their peer teaching friends through the Lesson Study for Learning Community activities. The selected learning models include Problem Based Learning, NHT, TPS, TTW, TGT, and Jigsaw Cooperative Learning. 21st century life skills developed are critical thinking skills, creativity, student communication and collaboration skills.

**Keywords:** capability; 21st century life skills; biology graduate students; Action Research in Education

## **Cognitive Student Descriptions in Mathematics Learning Through Lesson Study**

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### **Abstract**

Cognitive Student Descriptions in Mathematics Learning Through Lesson Study Herry Agus Susanto, Djatmiko Hidayat Universitas Veteran Bangun Nusantara Sukoharjo e-mail: [herrysanto\\_62@yahoo.co.id](mailto:herrysanto_62@yahoo.co.id) ABSTRACT Innovation of learning is absolutely necessary in improving the quality of learning outcomes both lecturers as teachers and students who are taught. The emergence of innovation because of a need, the need arises because of a problem that requires the search for a solution. This study aims to describe the cognitive aspects of students in learning mathematics. The description of cognitive aspects of students in learning mathematics aims to reference the preparation of lecturers in learning mathematics so that the tools, models or learning methods needed can be prepared earlier by the lecturers to support student peak performance during learning. Describing the cognitive aspects of the students through the lesson study that is on the second step do lesson study is the observer observation process in the lesson study during the course of learning in the classroom. Observer observation in lesson study was emphasized when students discussed group and question and answer process between students and lecturers. In the first step of the plan is the initial activity with the lesson study team to discuss the various preparations needed during the second step of the do and in the third step see as a form of conclusions evaluation with the expression of lecturers model and the findings of all observers in order to improve and analyze by researchers. The result of the research shows that the cognitive aspect of student's description covers students' brain activity which has six levels, namely: knowledge, comprehension, application, analysis, synthesis, and evaluation. Is an initial capital that needs to be raised in building ideas, ideas, methods or procedures to solve problem.

**Keywords:** mathematical characteristics, cognitive aspects, lesson study



## **Improving The Ability of The Teachers Competency Through Lesson Study at The Cluster School I, III And V in Prigen Pasuruan East Java**

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### **Abstract**

Lesson study was implemented at the School Cluster I, III, and V Elementary Schools in Prigen Pasuruan, in September 2018. So many positive impacts can be felt by educators in Guslah. The changes can occur to the students, teachers, model classes. The students are more active in learning activities. Teachers become more competen in their classroom, recorded the competency of the teachers improve by 12.8% during the activity. Supervisors do not only supervise the administration of the teachers, besides the low cost, the training of the teachers with Lesson Study models it can be done by all the schools independently.

Keywords: Ability, competency, lesson study

## **Caring Community In Mathematics Learning Through Cooperative Learning**

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### **Abstract**

The aim of this research is to describe the process of caring community through cooperative learning. In this research, data is analyzed by qualitative research. The phase of Lesson Study (LS) is implemented, that is plan, do, see. Data is collected by observation and interview. The results are, (1) the quality of interaction between students in a group is good, the high student gives some scaffolding to middle student, and middle student give some scaffolding to lower student, but the interaction between high student and lower student is not so good, (2) The activity in solving task in worksheet is very good. All students observe problems and task one by one and then discuss together about how to determine congruence, and its application. Some students in several group ask and discuss about the process and the result of congruence, but there are some students that just observe and copy the problems. All students solved problems and tasks, but not all is true, so some students that their answer is not true, ask to the students in their group and discuss other student's explanation. The conclusion is the quality of interaction and caring community in this mathematics teaching and learning process is good.

Keywords: caring community, lesson study, cooperative learning.

## **The Benefits of Video Recording for Lesson Study Observation and Reflection Activities**

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### **Abstract**

Lesson study is activities that have long been developed in Indonesia and provide many benefits for teachers, lecturers and prospective teachers in Indonesia. One technology that can be used to further develop lesson study activities is video recording technology. Currently the majority of lesson study actors in Indonesia still reflect the lessons based on eye observation or just based on memory of an event (memory based reflection). Only few reflection has been made based on video recording. The purpose of this paper is to discuss the importance of video recording as a material for reflection in lesson study. Through the help of video recording, lesson can be studied in more detail. Lesson study actors can view the video recording repeatedly to grasp deeper understanding of an event. This article is based on writer experiential experience and then analyzed through literature review.

Keywords: Lesson study, video recording, reflection analysis

## **Collaborative Learning: Towards 21st Century Learning Skills**

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### **Abstract**

Learning in the industrial revolutionary era 4.0 should refer to 21st century learning skills. Abab 21 learning skills include creativity and innovation, critical thinking and problem solving, communication, and collaboration. In fact, learning in schools today generally has not led to the achievement of these skills. To achieve 21st century learning skills can be pursued through collaborative learning. Collaborative learning is very different from cooperative learning, where cooperative learning focuses on group unity while collaborative learning focuses on each individual. The purpose of collaborative learning is not to achieve unity of ideas derived from group activities, but each member is encouraged to find various opinions / thoughts that are issued by each individual in the group. Through collaborative learning, students' communication skills will increase, students will be able to collaborate and collaborate, students are increasingly critical and able to solve problems, have creativity and become more innovative.

Keywords: Collaborative Learning, Skills, Learning, 21<sup>st</sup> Century

**The Effect of Behavior Cognitive Counseling With a Modeling Technique on The  
Arousing Self Potential in Directing Individuals in The Era of Industrial Revolution  
4.0**

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**Abstract**

This study aimed at finding out the effect of behavior cognitive counseling with a modeling technique on the arousing of self potential in directing individuals in the era of Industrial Revolution 4.0 among high school students in Singaraja city, Bali. Based on the empirical findings, at present the students from elementary to high schools (junior high school/ senior high school/ senior vocational school levels are experiencing degradation because of digital world negative influence that causes the positive self potential that should have been experiencing a progress, to regress into a latent stage. The behaviors can be observed at present in the society in some events, such as in family members who are queueing in a certain place for an hour who do not communicate with one another because they are being absorbed with their own gadgets. The same event also occurs at the time of break at school. Hence this condition causes a low level of social interaction with each other or even with close people. Looking at this phenomenon, it is believed that young generation will face problems in keeping up with the era of industrial revolution in the future. This is not only caused by technology that has to be mastered but also by the great energy of self that supports it. Based on this problem, the arousal of self potential, that consists of the intellectual aspect and the non-intellectual ones are very potential and urgent to be trained through a quasi-experimental study of behavior cognitive counseling with a modeling technique. The sample was determined by random sampling. Through the quasi- experiment in a lesson study setting in such a way that there were learning interactions in the community among teachers, students, and the environment. Also, with the use of the modeling technique, one positive interactions could develop in arousing the self potential of the students. The results showed that there was an effective effect of the cognitive counseling with the modeling technique in arousing the self potential in directing oneself in the era of Industrial Revolution 4.0 (the tobs value of 22.66 and ES value of 3.37).

Keywords: behavior cognitive counseling, modeling, self

## **Improving Teacher's Professionalism Through School-Based Lesson Study at Cluster III Elementary School in Marga District**

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### **Abstract**

The aim of this activity was to improve teachers' understanding of the importance of their professional competency. One of the approaches that used to improve teachers professionalism in teaching and learning process is through school-based lesson study. The steps followed in this activity were 1) through a seminar to improve understanding of the importance of school-based study, it's to make teachers care more about the right of students to learn as well as possible; 2) dissemination of the implementation of school-based lesson study through video conferencing results of training in Japan, 3) Strengthening the material of 5 (five) subjects in elementary school and, increasing learning capacity in Cluster III Elementary School in Marga District with the following stages: (1) plan, (2) do, and (3) see. Based on the results of implementing school-based lesson study for 4 times, it can be concluded that the professional competence of Cluster III Elementary School teachers in Marga District is in a good category. This is shown in the ability of teachers to master the material and characteristics of students, showing mature and exemplary personalities, communication with fellow teachers, students, and society is good, seriousness in making plans and teaching preparation. All of this shows an improvement in the quality of teaching through school-based lesson study.

Keywords: teacher's professionalism, school-based lesson study

## **Improving Teacher Job Satisfaction Through Organizational Culture And Work Motivation**

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### **Abstract**

This study aims to describe two factors that will increase teacher job satisfaction such as organizational culture and work motivation. The population of this research is private Islamic university lecturers in Jambi Province, and by using proportional random sampling obtained 249 respondents. Sequential Explanatory Design mixed method is used to retrieve quantitative data and the results will be deepened by a qualitative method to obtain in-depth and comprehensive research results. The study indicates a hypothesis which states that there is a positive relationship between organizational culture and job satisfaction can be accepted, meaning that the higher the organizational culture, the higher the level of job satisfaction. Likewise, the hypothesis which states that there is a positive relationship between work motivation and job satisfaction can be accepted, meaning that the higher the work motivation, the higher the level of job satisfaction.

Keywords: organizational culture, work motivation, job satisfaction

## **Developing Learning Methods with TPACK Approach for the Subjects of Cleavage and Blastulation in Embryology through Lesson Study**

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### **Abstract**

Cleavage and blastulation are stages of embryonic development studied in Embryology for students of prospective biology teachers. These subjects are abstract because they take place under conditions that cannot be perceived, making it difficult to learn and understand. To facilitate students in mastering the concepts of these subjects, a particular learning method that provides visualization of teaching materials is required, as well as providing opportunities for students to learn independently and to learn in the real learning community. Lesson Study, with its seven keywords or principles, namely professional coaching, continuing, knowledge sharing and creation, collaborative, collegiality, mutual learning, and community learning, and 3 typical steps in its implementation cycle which are plan, do (open lesson) dan see (reflection), is very effective in assisting the development of a learning method that integrates e-learning method and in-class learning very well, directed and its effectiveness is tested in learning achievement. Learning Method with TPACK Approach for the subjects of Cleavage and Blastulation in Embryology developed through Lesson Study is very effective in providing convenience for students of prospective biology teachers to achieve their learning achievement.

Keywords: Blended Learning, Cleavage, Blastuation, Embryology, Interactive Multimedia, Lesson Study, TPACK



## **Planning and Implementation of Soft Skills Students Through Empowerment of Student Activities in Education Oriented Lesson Study**

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### **Abstract**

Pasundan University is one of the private universities that has a high commitment to improving the quality of graduates who have the ability to compete, both nationally and internationally. Efforts to realize this is implemented in an effort to improve the quality of graduates, one of which is improving lecturer services through lectures. The orientation program that began to be realized one of them was the lesson study program. This is a means to build students' hard skills and soft skills through experience in lecture activities. The potential of supporting resources in the campus environment is strived to further color the characteristics of experience-based learning and environmental empowerment carried out at FKIP Unpas. Efforts to build these soft skills have been started in 2017. This is research and development (R & D) research. Workshops and focus group discussions (FGD) were conducted to formulate and make instruments for developing soft skills in lesson-based learning. The research sample consisted of public and private secondary school teachers, lecturers, and student representatives from each student activities. The instruments used were observation sheets, participant response questionnaires, semester learning plan assessment rubrics, design lessons, lesson study guides, documentation and interview guides. The results of the study are that most of the participants have been able to formulate a lecture curriculum in the form of soft skills achievement reflected in the semester learning plan, lesson design based on the achievement of soft skills, and open lesson videos. Further research will be conducted on the dissemination of research results in lectures at FKIP Unpas.

Keywords: lesson study, soft skills, student activities

## **LSLC Impact on Model Teachers at Piloting Schools in Batu Tourism City**

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### **Abstract**

Geography subject to class XI IPS is oddly one topic of study material in the condition of the Indonesian territory as a maritime axis. During this time most teachers in teaching this subject still use one-way learning direction, such as a lecture method, thus making students feel bored. Here is an evidence that there are still students who have not been able to reach KKM. Therefore, it should be a paradigm shift in studying the teaching and learning process and interaction between students and teachers and considering students' creativity. The purpose of this study is to determine to increase motivation and learning outcomes of class XI IPS 2 SMA Negeri 5 Mataram 2016-2017 school year. It becomes the axis of this research is classroom action research (CAR) which is carried out in two cycles each cycle consisting of planning, implementation, action, observation, and reflection. The subject of this research is observation, tests, and questionnaires, for interview and documentation data collection techniques by using qualitative and quantitative descriptive analysis techniques.

The results showed that there is an increase in motivation and student learning outcomes in implementing a jigsaw type learning cooperative learning model for students of class XI IPS 2 Mataram 5 Public High School in the academic year 2016-2017. It is concluded that the increased motivation and learning outcomes of students from cycle I to cycle II, learning motivation in each cycle, among others: cycle I. Student learning motivation (7.50%) criteria both increases to (87.50%) criteria are very good at cycle II. in the pre-action learning outcomes of students showed an average of 78.20 increased to 81.05, and increased to 88.50 in cycle II. The jigsaw cooperative learning can improve motivation and learning outcomes of class XI IPS 2 SMA country 5 Mataram school year 2016-2017.

Keywords : LSLC, model teachers, piloting school

## **Giving feedback from peers to improve the quality of essay for grade 6 students**

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### **Abstract**

Writing activities are part of Indonesian Language Lessons in Primary Schools. As an activity to express thoughts, feelings, and information in the form of simple essays, writing is one of the Graduates Competency Standards for Grade 6 Elementary Schools. With the theme written by "Experience During Gagasceria", lesson study was conducted to see the process of giving feedback to friends' essays so as to improve the quality of essays of Grade 6 students. Indonesian Language Learning with the aim of providing input between students on the essays made by collaborative learning. Students are grouped according to the stages of writing (Linda Schwartz, 2005), namely: Prewriting, Writing, Revising, Editing, Publishing. Students in both revising and editing groups provide feedback on - Writing techniques (punctuation, capital letters) - Contents of essays (title, plot, essay content) - Inputs related to writing techniques and content. The process of providing input between students raises the question: "How Much Feedback from Peer Friends Is Used to Improve the Quality of Essay?" From observations on essays by Grade 6 students, it is known that almost all feedback from peers is used by students. The feedback provided includes: giving a title (from no to being a title or changing the title to more interesting); capital letter writing (name of person, place, word in the middle of a sentence); standard words from non-standard ones; synonym; use of other punctuation marks (commas, colons); write an extension; use of the words 'and' at the beginning of the sentence; and do not write the words again with number 2. Only a little feedback is not used, namely writing suggestions for words that are not correct and capital for the song title. Other data obtained from the essay of grade 6 students is a description of the ability of students as editors. Students' understanding of different types of letters such as unfamiliar place names, prayer names and punctuation marks (types of punctuation and use) influence a lot of feedback and the depth of students in giving feedback. From this lesson study, the inspiration obtained for further learning is a guide to the use of capital letters and punctuation marks for class 6. In addition, before students give feedback, students do the editing process of their own essays so that students' understanding of EYD increases.

Keywords: peers, feedback, Indonesian Learning Science

## **Learning Science, Technology, Engineering, Art, and Math (STEAM) assisted by E-Learning-based Virtual Laboratory Media on Students' Metacognition Ability in Physics Experiment Courses**

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### **Abstract**

The development of information and communication technology has penetrated into various sectors one of them in the education sector. The application of technology in learning can take the form of the use of virtual laboratory media to explain concepts that require practicum, especially in material with asbtrak and online learning through e-learning to facilitate students and instructors in learning anytime and anywhere. This study aims to determine the ability of students' metacognition after the application of Science, Technology, Engineering, Art, and Math (STEAM) assisted by E-Learning-based Virtual Laboratory Media in Physics Experiment Courses in Jurusan Pendidikan Fisika, Universitas Papua. This type of research is qualitative research through the stages of Lesson Study activities. The research data was obtained through the student's metacognition ability test instrument given before and after learning, observation sheets, interview guidelines, and video recordings during the open class. Data analyzed through Rasch modeling techniques using winstep and facet applications to analyze students' metacognition skills and responses after learning. Lesson Study activities include three stages of a series of activities in each cycle, namely Planning (Plan), Implementation (Do), and Reflection (See). In the Plan phase, discussions were held with the team of lecturers to develop the Semester Learning Plan (RPS), Chapter Disign, and Lesson Plan. In the Do stage, learning is done by model lecturers based on the RPS that has been prepared. In the See stage, reflection is done to study the implementation of learning that has been done by the model lecturer to reveal weaknesses and strengths to be followed up on the next learning. The results showed that students' metacognition ability increased, students' perceptions of learning were very good and the learning atmosphere became more lively. Therefore, it can be concluded that through the Implementation of Science, Technology, Engineering, Art, and Math (STEAM) assisted E-Learning-based Virtual Laboratory Media can develop Student Metacognition Ability in Physics Experiment Courses compared to before.

Keywords: STEAM, Virtual Laboratory, E-Learning, and Metacognition Ability

**Implementation of Android-Based Mobile Learning Media an Efforts to Improve The Quality of General Biology Learning Through Lesson Study of Biology Education Students in University of Papua**

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**Abstract**

The purpose of this Lesson Study activity is to implement Android-based Mobile Learning media as an effort to improve the quality of learning in the General Biology course of Biology Education Students at the University of Papua. This Lesson Study activity is carried out in two cycles. Each cycle consists of three stages, namely; planning (plan), implementation (do), and reflection (see). Each plan produces design chapters and lesson designs, Learning Implementation Plans (RPS), learning media and assessment documents with the material and sub-material that has been compiled. The implementation (do) is done by utilizing ICT through the application of Mobile Learning Media Based on Android where currently the use of Android-based smartphones is very popular and quite a trend among students. Data was collected through observations by observers (observers) and learning outcomes. The results obtained from observation, reflection and data analysis show that (1) mobile learning media can facilitate students learning anywhere and anytime according to the time they have. (2) Mobile learning can be accessed virtually anywhere, by providing access for all lecture materials, especially the General Biology course. (3) The use of Android-based Mobile Learning Media can increase the activity and learning outcomes of Biology Education students at the University of Papua.

Keywords: Lesson Study, Mobile Learning, Android, General Biology

## **Development Model of Special Education Teachers Competency through Lesson Study**

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### **Abstract**

Development Model of Special Education Teachers Competency through Lesson Study Juhanaini<sup>1</sup>, Yuyus Suherman<sup>1</sup> Riksmak Akhlan<sup>1</sup> <sup>1</sup>Special Education Department, Universitas Pendidikan Indonesia [juhanaini@upi.edu](mailto:juhanaini@upi.edu) Research focused based on empirical conditions in Bandung Indonesia, used qualitative method from the introduction, formulating and validation of development competency model. Development model involving the elements of academics, bureaucracy and special education practitioners in the city of Bandung, Indonesia. The results of the study showed that the model for developing the competencies of Special Education teachers through lesson study was constructed through elements; (1) Teaching plan, which is formulated based on the challenges of daily learning by the teachers model or classroom teacher; (2) Do: The implementation of the teaching plan by the teacher, and the observer's role is to observe learning; (3) Reflection: delivery of opinions and ideas as a solution for observers, including components of class layout components, learning processes related to class interaction systems, established cooperation, and individualization of learning. Research found the implementation of lesson study is closely related to the role of school principals and motivational teachers to learn, the diversity and level of observer education psychologically and the substance of learning development become more variation. Motivation and opportunity of being a teacher models of lesson study is one of the factors to improve the competence of special education teachers. The success of collaborative and sustainable lesson study is believed to improve the competence of special education teachers. Keyword: competency, implication, lesson study, special education teacher.

Keywords: competency, implication, lesson study, special education teacher

## **Lesson study as a learning system: The historical development of lesson study in Japan**

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Lesson study is an approach for professional development originated in Japan one hundred and fifty years ago and now it is practiced internationally over 40 countries. Since lesson study is introduced to many countries as an effective form of professional development, it is often understood as a model for collaborative learning of teachers to enhance subject expertise in Mathematics and Science. However, lesson study is more than a model for professional development but has been used as an approach not only for teacher training but also for lesson analysis, curriculum development, practice-oriented research, and demonstration lessons. Lesson study has developed dynamically over the history accommodating to sociocultural conditions and the needs of practitioners, policymakers, and researchers at the times. Lesson study continues to be practiced to today since practice is socially constructed and context-dependent; thus, lesson study is flexible to adapt to the local system. In this sense, lesson study can be understood as “a flexible learning system” (Lewis, 2002). Because this, the attention needs to be paid to underlying philosophies and assumptions behind the practice of lesson study. In this presentation, I will review the underlying philosophies and assumptions of Japanese education that have contributed to the development of lesson study focusing on three points. Firstly, lesson study is supported by the holistic approach to student learning and where the role of teachers is structured to support students’ learning as a social experience for their long-term development (Tokkatsu). Secondly, the teacher-initiated inquiry centered on student learning is influenced by the progressive movement and the tradition that value narrative exchange of classroom experience. Thirdly, “contextualized reasoning” (Inagaki & Sato, 1996) is valued as the expertise in lesson study as reflective practice, and this is distinguished this from technical expertise. These issues will be discussed further in relation to the difference from the practice in Indonesia.

Keywords: Lesson study; professional development; professional learning community; learning system; collaborative learning; progressive movement; bottom-up

## **Problem Based Learning to Enhance Students' Collaborative Skills**

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### **Abstract**

Collaborative skills are one of the 21st century skills that students should have in the era of industry revolution 4.0. Hence, innovative efforts are required in conducting the learning process especially in higher education and problem based learning is one of instructional strategies that can be used for this purpose. This research focused on designing problem based learning to improve collaborative skills in the aspects of interpersonal, group management, and inquiry skills. The method used was design based research because this research would like to develop students' active learning to improve collaborative skills. This research involved undergraduate students taking Learning Materials Development course and resulted in chapter and lesson designs that were validated through expert judgment.

Keywords: problem based learning, collaborative skills, chapter design, lesson design



## **Implementation of Lesson Study Using Problem Based Learning (PBL) Type Audio Visual Media**

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### **Abstract**

The purpose of this study is to describe the application of lesson study by using problem based learning (PBL) learning model type audio visual media in PPKn subjects to improve problem solving skills in vocational students. This type of research is qualitative with descriptive method. Research subjects were students of Class XI Marketing 2 SMK Pasundan 1 Bandung City. This research data is based on plan, do, see. Data processing with triangulation techniques. The conclusion of the research results is the implementation of lesson study using the problem based learning (PBL) model of the type of audio visual media carried out according to the stages in the lesson study namely plan, do, and see. Lesson study contributes to a more mature learning planning process, so the model lecturers feel more prepared in the implementation of learning. Effective lesson study can improve the quality of PPKn learning in vocational schools. The implementation of a well-designed lesson study can make model lecturers more creative and innovative.

Keywords: Lesson Study, Problem Based Learning (PBL), Visul Audio Media

## **Effect of Lesson Study on Class 7C Mathematics Learning in Bandung BPI 1 Middle School**

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### **Abstract**

The world of education has become the main focus of government attention in Indonesia at this time. One of the steps that the government has taken for the world of education in Indonesia at this time by improving the national curriculum. Where the main focus of this national curriculum is how to improve the quality of the learning process of teachers and students in the classroom. This is in line with the program proposed by Lesson Study. Lesson Study is not a method or strategy in teaching and learning activities, but it is an activity carried out by a group of teachers in the same subject (MGMP) in an effort to improve the process of teaching and learning activities of teachers and students while in the classroom collaboratively and continuous. In Lesson Study activities, teachers can discuss, choose and apply various learning models to be applied in the classroom, through three stages, ranging from plan, do, and see. The purpose of this writing, the author wants to share experiences about the role of Lesson Study in influencing the teaching and learning process that has been done in BPI 1 Bandung Middle School, especially in Mathematics subjects in class 7B. The results of this Lesson Study activity showed very satisfying results, ranging from learning activities that became more interesting, established communication (dialog dialogue) between teachers and students and students and students, so that the desired learning objectives were achieved

Keywords Lesson Study, Mathematic Learning

## **Teachers perception on classroom management in English teaching before and after lesson study implementation**

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### **Abstract**

Classroom management in English teaching is important because mostly the process of teaching and learning is conducted in the classroom. However, many teachers still have perception that classroom management is difficult to do in English teaching and mostly the teachers do not really aware to manage the classroom. Therefore, the study is conducted to investigate the teachers perception in classroom management in English teaching before and after the implementation of lesson study since lesson study is believed could change the teachers perception in teaching and learning. The study uses two instruments in collecting the data. The instruments are questionnaire and interview. The questionnaires were given to sixteen English teachers from three high schools under the same foundation in order to get teachers perception in classroom management in English teaching. The sixteen English teachers are the teachers who involve in the implementation of lesson study. Moreover, the interview was conducted to three teachers who have been teacher model in lesson study implementation. The interview is aimed to support the data from questionnaire. The questionnaire and interview were given before and after the implementation of lesson study for three cycles. The result shows that the implementation of lesson study can change the perception of the teachers in classroom management comparing to before and after the implementation of lesson study as the impact of the collaboration and the chance to share among the teachers during lesson study implementation. The study is expected to contribute professional sources for teachers and other researchers about the implementation of lesson study in English teaching in high schools level. Moreover, the study is significant to reveal the impact of lesson study implementation in English teaching.

Keywords: perception; classroom management; before; after; English; lesson study

## **The Implementation Of “Jumping Task Model” in Lesson Design As A Bridge To Help Teachers Improving Learning Quality**

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### **Abstract**

Recently, teachers in Indonesia have difficulties in arranging lesson plan, especially how to build students' concentration. The standard form of lesson plan tends to make teachers concentrated on administrative formats, not oriented to learning problems. The purpose of this study is to describe the implementation results of the jumping task model (JTM) to assist teachers in developing lesson plans and to improve the quality of learning. This study also promotes the making of simple lesson plan which conducted by groups of teacher. Observations set out in this study include the stages of implementing lesson study and student learning outcomes. Data collection is done by observation techniques, documentation and tests of student learning outcomes, as well as interviews in order to strengthen the drawing conclusions. The results showed that the application of the JTM improves learning quality by these following indicators (1) the production of lesson plan that was oriented towards student learning problems increased by 42%, (2) the students' active has escalated, and 3) the score of the quizzes has raised. The low percentage of lesson plan based on the problem is due to the lack of understanding of the concept of lesson study by the groups of teachers who carried it out.

Keyworde: jumping task model (JTM), improving learning quality, lesson design

## **Improving Students' Self Efficacy Through Peer Teaching Method Based Lesson Study**

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### **Abstract**

This study focuses on the use of mathematics learning Peer Teaching Methods at SMP Cokroaminoto Palopo, as well as the implementation of Lesson Study in an effort to optimize the improvement of student self efficacy. The purpose of this study was to find out how the description of students' self-efficacy and the implementation of lesson study in the classroom, and to find out how to improve student self efficacy by implemented peer teaching methods based on lesson study. This research was carried out with 4 stages of lesson study where the results of the study showed that descriptively there was a change in student self efficacy at each meeting where in the first stage the average student efficacy self by 21.2 increased to 25.33 in the second stage and again increased to 36 in the third stage and the fourth stage increased to 39.8. Descriptively, it can also be seen that the self efficacy of new students experience a better change in the third stage. From this study also obtained the gain value of self efficacy is 0.83 which is in the high category. In inferential terms, the results of the analysis show that students' self efficacy has increased, it can be seen from the results of the analysis obtained by the sig value.  $<0.05$  which means there is an improvement in self efficacy. Based on the results of the study and discussion it was concluded that there was an improvement in student self efficacy through peer teaching methods based on lesson study

Keywords: Self Efficacy, Peer Teaching, Lesson Study

## **How to improve the quality of student writing through the Collaborative Learning method?**

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### **Abstract**

Indonesian Language Learning develops the ability to read, hear, write and speak. The ability to read and hear is input obtained from students, while the ability to write and speak is the output or results provided by students from the process of reading and listening. The Indonesian language learning process at Gagas Ceria Elementary School in developing language skills is packaged in the form of competency standards, namely the minimum ability qualifications of students that describe mastery, knowledge, attitudes, and skills expected to be achieved in each class and/or semester in a subject. Writing activities in Indonesian language learning are activities that are difficult for students because students are expected to have the ability to express ideas, thoughts and feelings in the form of coherent sentences, coherent and attentive to the complete sentence structure so that it is easily understood by the reader. According to Linda Schwartz, 2005, there are 5 stages of writing, namely: Prewriting, Writing, Revising, Editing, Publishing. During the process of writing this essay, students brainstorm as an initial prewriting process, by discussing with friends and writing fun activities during the activities at Gagas Ceria. After that, students begin to write the draft plot that will be written in the writing process. Constraints experienced in this writing process, namely, there are some students who still have difficulties in the prewriting process, because of a little brainstorming experience. The purpose of this lesson study is to improve the quality of student writing through the Collaborative Learning method. With the method of collaborative learning, children will interact with each other to discuss ideas to add experience, provide input to each other about writing a complete storyline and sentence structure, and revise the essays that have been made by their friends. I grouped it according to the essay group, namely the prewriting, writing, revising, editing groups. Every student does the prewriting, writing, revising, editing process by using thinking tools in the form of brainstorming to write fun experiences during the activities at Gagas Ceria and using flow charts to write down the storyline that will be made in the essay. The results of this lesson study, students are able to increase the quality of writing their essays, so that the storyline of his experience becomes more coherent and coherent, and writing the sentence structure for some students is more complete. Insight obtained from this lesson study is the target time of achievement of students' writing skills, and this time target will be written in the planning of the next teaching and learning process so that students can complete writing this essay on time.

Keyworde; Collaborative learning, Lesson Study, Post Lesson Study

## **How Lesson Study Regarding Classroom Dialogue Affect on Students' Perceived Situational Learning Processes.**

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### **Abstract**

This study investigated the effects of lesson study on productive classroom dialogue and its effect on students' perceived situational learning processes. Lesson study has been used as a professional development program where teachers will be able to improve on teacher instructional practices. In this study, lesson study was conducted in two junior high schools for two cycles which a cycle starts from build a lesson design, implementation lesson design in science classroom, reflection, and revise the lesson design. A qualitative approach design in this study provides a detailed look at each aspect of lesson study which showed the impact on productive classroom dialogue and its effect on students' perceived situational learning processes. Classroom dialogue and students' perceived situational learning processes analyzed from transcribed video recordings. The results showed that lesson study was effective for improving productive classroom dialogue and increasing students' perceived situational learning processes. In general, Revising lesson design as a part of lesson study was effective to improve teacher question that created productive classroom dialogue and gave positive impact to students' perceived situational learning processes in science classroom. This study contributes to upgrade teacher instructional practices and productive classroom dialogue in the science classroom.

Keywords; Self Efficacy, Peer Teaching, Lesson Study

## **Research Question, Attitude Listening to Teachers and Children**

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### **Abstract**

Asking questions is one sign that someone wants to know more about something. This will trigger one's thinking ability. Learning activities will be more enjoyable when there are interaction and exchange of thoughts about the material/ topics being studied. In learning activities, asking not only focuses on children, but the teacher asks questions. Asking this question does not always occur when the learning process takes place, but it is also important to do when the teacher plans. At this lesson study activity, the teachers at GagasCeria Elementary School held a discussion about the importance of the question/research question when we were planning. What do we want to know in this study? What do we want to observe? Why is it important for teachers and children? We agreed together what we wanted to know about lesson study this time based on the problems felt by the teacher and also the children during the learning process. Questions or research questions agreed upon at SD GagasCeria make us have the same goal in this lesson study. Through this research question, we have clearer goals and have the same understanding in observing the learning processes that occur in the classroom. The agreed research question is how to listen to teachers and children during the learning process that occurs in class. This is important to us because through this listening attitude can build learning communities that listen to each other. When the lesson study focus this time was listening to skill, this reflected again the steps that the teacher and child had done before. The findings through this lesson study are a further step for the teacher, especially, to rethink how the teacher builds listening skills so that the listening skills of children can be well developed. Therefore the teacher is a model for children, which will be imitated by behavior and he said. Through this lesson study, we also found that listening skills are not just giving instructions to children about the tasks that will be done, but also how to listen to the needs of children in class, how to listen to children's responses while doing their assignments, how to predict the possibilities of the response the child will bring, how to build a dialogue process in class so that a community of mutual listening, mutual respect, knowledge of each other is built. How important the research question agreed upon at the beginning of the lesson study activities is to build a learning community at school. All the teachers involved in lesson study have the same purpose and understanding when planning open lesson activities so that when we observe and reflect we can see more directed and move in the same direction, namely the teacher's listening skills and also the children.

Keywords : research questions, attitude listening to teachers and children



## **The Cultivating of Socio-Emotional Through Lesson Study for Learning Community (LSLC) to The Students at Kindergarten IDHATA**

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### **Abstract**

The attainment of maturity in socio-emotional affected the early childhood growth. This research would like to see the cultivating of socio-emotional through lesson study for learning community (LSLC) to the students at kindergarten IDHATA. The goal of this research was to describe socio-emotional of early childhood by qualitative approach. The result of this research indicated that the student's socio-emotional ability at IDHATA kindergarten got successfully enough through lesson study for learning community (LSLC). It could be seen the students have the ability to care and help each other's. They also have an eagerness to share the information. In the other occasion, the students showed the patience in finishing their job gathered by having high responsibility. Keywords: Socio-Emotional, Lesson Study for Learning Community.

Keyworde;Socio-Emotional, Lesson Study for Learning Community

## **Utilization of the Learning Forest Prototype to Increase the Students Careness Character of Environment through the Lesson Study for Learning Community (LSLC)**

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### **Abstract**

The objective of the research was to build the students careness character of environment through the utilization of learning forest prototype. The research was conducted by using classroom action research that consist of three cycles trouhg the Lesson Study for Learning Community (LSLC) program. During the learning process, the students planted the plants, fertilize, irrigate, and take care of plants. In this research, the researchers collaborated with some observers. The observers observed the students activity by using the observation sheets of students careness character of environment. The results of the research indicated that the score of each cycles were increased with the average of final score was 91.72. In the initial process before implementing the research, the students careness character of environment was not appeared. Moreover, the result of the first cycle was 89,00 (89 %). Hence, the increase of first cycle to second cycle was 2,81%, then the increase of the second cycle to third cycle was 3,35%. Based on the result, the researchers suggest the utilization of learning forest prototype to increase the students careness character of environment.

**Keywords:** Learning Forest Prototype, Students Careness Character of Environment, Lesson Study for Learning Community (LSLC)

## **A Meta Analysis Study of The Effectiveness of Lesson Study Implementations in Teaching**

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### **Abstract**

This study aimed at finding out: (1) the effectiveness of lesson study implementations in thematic teaching by using cooperative learning model to the third and fourth grade students at public elementary schools in the town, suburbs and villages in Buleleng regency, Bali. (2) the improvement in social learning skill of the students as the nurturance effect in learning. This study was a quasi-experiment with posttest only control group design. The population consisted of 600, with the sample of 120 people selected by stratified random sampling. The data were collected using thematic teaching test and a rubric of social learning skill test. The data were analyzed using multivariate analysis. The results showed that 1) the learning achievement of the students who learned with cooperative model falls into the very good category; 2) there is a significant difference in learning achievement in thematic teaching between the group of students who learned with cooperative learning model and the group of students who learned with the conventional teaching model ( who come from the town, suburbs and villages). The difference can be seen from the computation using F-test with the result ( $F_{obs} = 0.01 < F_{c.v} = 2.04$ ); and 3) Lesson Study can improve the students' social learning skill based on the meta-analysis of the nurturance effect of the teaching. Based on these results, it can be concluded that the implementation of lesson study can be used as a way that contributes to the attainment of the student's progress in learning.

Keyworde; cooperative learning, lesson study, thematic learning achievement, social learning skill

## **The Effectiveness of Lesson Study in Improving the Lecturers' Performance in Learning Process at Faculty of Teacher Training and Pedagogy in Dwijendra University Bali**

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### **Abstract**

The aims of this research are namely to describe the quality of lesson study implementation on the lecturers of Faculty of Teacher Training and Pedagogy in Dwijendra University Bali and to analyze the effectiveness of lesson study implementation in improving the lecturers' performance in learning process. This research is an experimental research that conducting pre and post-test. The research method applied is descriptive qualitative. The sources of data consist of documents and lecturers that selected with purposive sampling technique. The documents are the chapter designs and observation sheets, while the research target are the lecturers' of Faculty of Teacher Training and Pedagogy at Dwijendra University Bali who have not get lesson study training yet. Totally, there are 35 lecturers. The final findings of this research shown that 1) the average score of lesson study implementation on the lecturers of Faculty of Teacher Training and Pedagogy Dwijendra University in academic year 2017/2018 is 94.45 with excellence qualification. 2) Based on the result of hypothesis test by using t-test, it indicated that the lecturers' performance in learning process after implementing lesson study is better than before ( $t=2,000$ ;  $p<0.05$ ). In addition, it shows the implementation of lesson study is effective in improving the lecturers' performance in learning process.

Keyworde; Learning Process; Lecturers; Lesson Study

## **Pedagogical Dialogue: Collaborative learning strategies**

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### **Abstract**

Collaboration between students is one of the competencies carried out in 21st-century learning. To improve these competencies a strategy and control are needed from the teacher as a facilitator in classroom learning. Not only from the learning model but also must be trained in habituation. Such habituation can be helped by giving teacher instructions and students' awareness of the importance of collaborating to create a superior generation. Habitual discussion, both class discussions, and group discussions can be an indicator of collaborative learning habituation. Pedagogical dialogue can be used as one of the discussion strategies that are tried to be developed by science teachers at BPI 1 Bandung Middle School. Through this paper, we want to share the results of this habituation for 10 times the learning cycle of science in class VII. The results of our analysis and studies show that pedagogical dialogue makes students more concerned about their peers (within and between groups), students' knowledge becomes deeper and students' dependence on teachers decreases. It is hoped that after applying the refracted of this pedagogical dialogue students can foster a spirit of good cooperation so we hope that this pedagogical dialogue is carried out continuously in all fields of subjects.

Keywords: collaborative learning, pedagogical dialogue, lesson study, group discussion, intergroup discussion

**Bahasa Melayu Teachers' Perception Towards Professional Learning Community  
(PLC) Lesson Study In Three Districts in Sarawak**

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Abstract

The study aims to examine the perceptions of Malay language teachers towards their understanding and knowledge of the Professional Learning Community (PLC) Lesson Study. Respondents for this study consist of 100 Malay language teachers who have been exposed to collaborative tools of PLC Lesson Study either through courses and workshops by the Ministry of Education, State Education Department and District Education Office. This study was carried out by distributing questionnaires to all respondents in Likert Scale. The data collected were analyzed using SPSS version 19. The data were translated into the

Keyworde; Professional Learning Community, Lesson Study (LS), Perception, TIMMS, Teacher Education Division (BPG) and Aminuddin Baki Institute (IAB)

## **Reflection on the Implementation of Lesson Study for Learning Community (LSLC) in West Sumatra 2014 – 2018**

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### **Abstract**

This article was written to describe the implementation of LSLC that the author did from 2014 to 2018 in West Sumatra, especially in Padang City, Solok Regency, Padang Panjang City, West Pasaman Regency and Padang Pariaman Regency. Activities carried out starting from socialization, training, and implementation of learning by applying the three pillars of LSLC, namely Plan, Do, See. This activity involved 112 Geography Teachers and 220 high school students. This article also explains the implementation of LSLC at Universitas Negeri Padang in 5 courses, involving 230 students and six lecturers. The valuable lessons from the implementation of LSLC over the past five years are, 1) Teachers and lecturers feel the benefits of LSLC to improve the quality of learning, but they just have limited time. The solution is to change the Plan, Do, See pillars into Plan (in See), Do, See (as well as Plan). So that with just one meeting, the three pillars of LSLC can be implemented, 2) The implementation of LSLC requires the support of stakeholders. At UNP, support for the LSLC implementation began to emerge in 2017 and was made official in 2018 with the establishment of the LSLC UNP Development Team in the Decree by the Rector of UNP and the availability of budget for the LSLC implementation for 65 study programs involving 195 lecturers. Cooperation and support from the Education Board to date is still in the form of permission for the activities implementation and is not yet in the form of a budget.

Keywords: LSLC, Geography learning

## **The Impact of Open Lesson on Teacher Reflection in Improving Learning Quality**

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### **Abstract**

This year the focus of Lesson Study at SD Gagasceria is about Listening Skill. The aim is to see the ability to listen to students during learning. One way to improve listening skills is to create structured learning stages that involve students during learning. We do an open lesson for 5th-grade students during Mathematics with a triangular material. The initial purpose of the planning process is to see the effectiveness of the learning stages designed regarding understanding the concept of triangles. During the discussion, the discussion focused a lot on designing systematic learning stages from starting to use concrete objects, images until students understood the elements contained in the triangle. Students' responses when learning seems to show less interest. When asked to conclude the material learned by students, they still tend to answer without thinking more deeply so they cannot explain the answer. At the end of learning, students still seem unable to explain the concept being taught again. While when students behave like that, the teacher gives a response in the form of a firm attitude and continues to ask until the student answers. However, in the end, the students still cannot explain and conclude the material that they have learned independently. Before PLD, the teacher watched the video learning that had been done. After watching the video, the teacher has his own perspective on what is seen and felt which is then connected with the learning process that occurs. The teacher reflects the attitudes and stages of learning and student responses. During PLD, teachers reflected more on their responses to students' attitudes, while observers focused more on students' responses. It was felt by the teacher during the learning process, watching the learning videos and discussions related to observers' observations when PLD was related to each other. Of the three processes emerged an insight to the teacher regarding the response of students and teachers. We found that learning attitudes have an effect on learners understanding so that when planning is not only focused on the stages of learning but also discusses plans for giving responses to students' attitudes. The results of the reflection then become the teacher's turning point in improving the response to students. The teacher begins to pay more attention to the attitude shown to students and see changes in student attitudes. A better change in attitude from both parties (teacher and student) can improve the quality of learning.

Keywords: Open Lesson, teacher reflection, learning quality



**Descriptive analysis of students' responses at 7th grade students of SMP 2 Ternate in the solar system learning using jumping task method.**

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**Abstract**

The research was conducted in SMPN 2 Ternate at the 7th-grade student. The aim is to describe types of students from their responses in solar system learning to use jumping task. The research was designed in lesson study that consists of a plan, do, and, see. The data about students response was collected from student and it was written after the lesson, meanwhile, observation data was collected when the lesson was doing. Both of the data are confirmed by test result and teacher opinion. The result shows that there are five types of student: the first group is student who learns, understands, and enjoys learning (3,85%); second group is who learn and understand so much (38,5%); the third group is who learn and understand a little (46%); and the fourth is who learn and understand what they learn but did not understand the content (3,85); and the last group are students who do not understand what they learn (7,7%). From the second and third group, who claim to understand, that are 2 students who false understand, it means they claim to understand, but they do not.

Keywords: descriptive analysis, student response, jumping task, solar system

## **Analysis of Collaborative Learning Improvement Through Lesson Study For Teachers**

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### **Abstract**

This research aimed to explain the analysis result from the analysis of collaborative culture improvement through lesson study for the teachers. The subject of this research was the mathematics teacher in junior high school number 1 Palembang. This was descriptive quantitative with survey method. Data were obtained through observation and questionnaires sheets. Data analysis was using the qualitative study to explain mathematics teachers did collaborative culture improvement that happened after the four steps in lesson study in junior high school number 1 Palembang in topic Number Pattern. There were four steps in the lesson study; they were the plan, do, see, and redesign. At the first meeting with mathematics teachers of junior high school number 1 Palembang in topic Number Pattern, there were some problems such as not all the teacher want to do the “lesson study” in their class, hard to find the right timing to do “plan” steps because mathematics was quite a lot of class hours, and it was difficult to determine the right context in the application “lesson study” in the class. The constraints experienced were of course initially enough to prevent the teacher from created a collaborative culture that was demanded in lesson study. Using lesson study gave positive impact to the collaborative culture of mathematics teachers in junior high school number 1 Palembang. Positive impacts that arise include each teacher who was involved in the process “plan” to explained facts, ideas, and suggestions on the design of learning tools in topic number pattern to make them better. And it gave a good impact on the improvement of the learning process in the classroom

Keywords: Lesson Study, Collaborative Culture, Number Pattern

## **Improvement Critical Thinking Skill Using Discovery Learning Trough Lesson Study in Bhakti Winaya Primary School Bandung**

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### **Abstract**

Improving the quality of learning at this time is very urgent. Various efforts that can be done by educators one of them is through using the right learning model. This study aims: (1) To describe the application of lesson study through the use of discovery models (2) To improve the critical thinking skills of elementary students through the use of discovery learning models. This type of research is qualitative with descriptive method. The subject of the research was the fourth grade students of SDN Bhakti Winaya. The data of this research is the implementation of plan, do and see. The research was carried out in the form of assignments of lecturers to schools and conducted as many as 8 meetings. The validity of the data is done through triangulation techniques. Based on the results of the study it can be concluded that the application of lesson study uses discovery learning models carried out according to the stages in the lesson study namely plan, do, and see. Lesson study makes the learning planning process easier so that in the implementation of learning the model lecturer feels more prepared. Lesson Study can effectively improve the quality of learning

Keywords: Critical Thinking Skill; Lesson Study; Discovery Learning

## **The Process of Studying A Cognitive Empathic Understanding: Student Interaction Approach**

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### **Abstract**

Empathic understanding is one of skills in counselling. It not quite the same with reflection of feelings, yet it need to be in accordance with other's experiences and feelings (Hill & O'Brien, 1999). The challenge in teaching empathic understanding is to teach the cognitive side of empathy. This study explore the concept of cognitive empathic understanding through student centered learning where students interact using paper work and sharing in class. In the first cycle in which students tell a situation and generate question from the situation, they also write down their own reflections. On next cycle, students will exchange paper works and try to understand other's feeling, thinking, doing in other's situation. The third cycle, students will share their experiences in understanding other's feeling, thinking and doing and discuss the similarity and difference in each other reflections. Results will be discussed further.

Keywords: empathic understanding; empathy; process, student interaction, counselling

## **Implementation of Lesson Study to Stimulate Students' Participation in Designing A Lesson Plan (A Case Study on English Teaching Development Course)**

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### **Abstract**

The course description of English Teaching Development of curriculum at Cokroaminoto Palopo University, this course gives students insights into the concept of English teaching, its program design and implementation. The students are introduced to the concept of English teaching in general used in Indonesia and its elements including syllabus and lesson plan. As the final product, the students are expected to generate a set of lesson planning documents. Relates to that final product, the students were asked to design a lesson plan by implementing lesson study as a main goal of this course. The objective of this research is to describe the implementation of lesson study to stimulate students' participation in designing lesson plan. The sample of this research was the fifth semester students of Cokroaminoto Palopo University from class B which consist of 30 students and it was taken by purposive sampling technique. This research uses descriptive method. In collecting the data, the researcher used students' grouping assignment product namely lesson plan document and supported by documentation. Based on the result, it was found that lesson study is a very useful activity to stimulate students' participation. It can be supported by seeing the documentation. Most of them had participated and be active in that discussion when they designed and developed their lesson plan. Based on that finding of this research, it can be concluded that through lesson study, it can stimulate students' participation in designing their lesson plan of English material.

Keywords: Lesson study, Students' participation, Lesson plan.

## **The Implementation Of Edugames In The Learning Of Indonesian Heroes**

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### **Abstract**

Role Playing Game (RPG) is a type of choice game because it contains complex story elements and role-playing art that makes players feel they are the characters they play in the game. This game is a means to make alternatives and make all assumptions that games are not only for games and entertainment, but games can also educate young people depending on the theme and storyline and the messages that depend on the game. The making of this educational game application aims to create an Educational Game Role Playing Game (RPG) as a Learning Media for the History of Indonesian National Hero Figures. The benefits of making this educational game as a new learning media and can be useful for students in terms of learning. The process in making this application requires design with stages of multimedia development, concept, design, material of Collecting, Assembly, Testing and Distribution. Designed this game players play while learning about Indonesian National Heroes, where players will adventure to find out material about Indonesian National Hero Figure. There is material of the hero figure along with the presence of pictures / photographs of Indonesian national hero figures and the voice of the character's material. Through learning media using educational games is expected to provide a new nuance in learning, so users will feel challenged in playing while learning. This educational game contains historical material especially on the material of the Indonesian National Hero Figure. The software used is RPG Maker VX Ace because this software is equipped with features that are more complete than the previous series.

Keywords: learning media, education games, role playing game

## **Integrating Luwu Local Culture into the Teaching of Reading Comprehension (Students' Participation and Perception)**

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### **Abstract**

Integrating local wisdom into the teaching of EFL classroom is commonly paid less attention by teachers especially in teaching reading comprehension, meanwhile it has been an agenda in national curriculum now. Most of teachers provide their students with the text derived from the English speaking countries which reflect the native speakers' cultures. This somehow brings problem for the students in understanding the subject and its effect to their classroom participation since they have limited prior knowledge about the text. This particular research is done in order to find out the students' classroom participation in reading comprehension class with the integration of Luwu local culture and how students' response to it. The data derived from video recording and questionnaires. The result of the research found that students' participation through the integration of Luwu local culture is in Competent level and they have positive response to the integration of Luwu local culture into the teaching of reading comprehension.

Key words: Luwu local culture, reading comprehension, students' participation, and perception.

## **Designing Jumping Task on Multiplication using PMRI and Collaborative Learning for Third Grade Students**

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### **Abstract**

Contrast to the shared task at the beginning of mathematics lesson, jumping task is the central part of the teaching that uses of higher order thinking skills (HOTS) in Japan. In Indonesia, the curriculum 2013 revised stress on how to use of HOTS in the mathematics lesson, on how to use daily live context and collaborative learning. The purpose of this paper is to investigate the role of jumping task in supporting students learning multiplication in the grade 3 in a primary school in Palembang. To do that, this research uses design research as the method. PMRI theory is used in finding context and content. Also, lesson study for learning community (LSLC) that uses of collaborative learning is used in the learning process. Results show that student with higher competence can solve jumping tasks while the student with the low level has a problem with multiplication concept. However, after guided using collaborative learning student then can solve the HOTS problems or jumping task.\

Keywords: Multiplication; Curriculum 2013 revised; Collaborative learning; PMRI; Design Research



## **Instructional Design Linear Equations with Two Variables using Dart Games and Lesson Study for Learning Community (LSLC)**

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### **Abstract**

This study aims to design Local Instructional Theory (LIT) of linear equations with two variables using the PMRI approach and Lesson Study for Learning Community (LSLC) system. This study involved students, in cycle 1 involving six students and in the second cycle involved 32 students in junior high school 1 Palembang. Data were collected through student activity sheets using a dart game, pre-test, post-test, video, and interview. Data were analyzed by comparing the Hypothetical Learning Trajectory (HLT) and what happens during the learning process. The results of the analysis show that learning using the PMRI approach and the LSLC system can support and assist students' understanding of linear equations with two variables.

**Keywords:** LSLC; Design Research; PMRI; Linear Equations with Two Variables; Dart Game

## **Implementation of Collaborative Learning in Climate Change Based Research Student on MIPA FKIP Tanjungpura University**

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### **Abstract**

Issue and global climate change effect are demanding peoples to have a positive contribution for preventing and resolve in all field include education. In university, necessary to the concern of environmental condition. Environmental lectures in MIPA education major FKIP Tanjungpura University take place in three study programs namely chemistry education, Physic education, and biology education. One of the lessons in environmental science were included climate change and the effect so that to reach learn goal, learning device like the module of the lesson can be coordinated together by collaborative learning. Implementation of collaborative learning can bring student creativity in designing a simple experiment about climate change which related to the effect to biotic and abiotic components.

Kywords: Collaborative Learning, Research, Climate Change

## **Students' Response towards The Use of Running Dictation Method in Zoology Invertebrate Course through Lesson Study Activity**

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### **Abstract**

In mastering vocabulary is not easy and simple to do. The students need an appropriate way to learn vocabulary. In this study, the researcher had tried to apply a method called running dictation in teaching Zoology Invertebrate course especially in teaching Biology Vocabulary (Latin Language Terms) to her students through lesson study activity. This study aims to describe how the students' response when they studied Zoology Invertebrate course using running dictation through lesson study activity. This research uses descriptive quantitative method. The population of this study was the fourth semester students of Biology Education Study Program at Cokroaminoto Palopo University which consist of three classes. The total sample was 30 students from class B and it was taken by purposive sampling technique. The researcher used questionnaire as instrument of this study. The result shows that all of the students give positive response towards running dictation method in studying Zoology Invertebrate course especially in mastering Biology Vocabulary (Latin Language Terms) through lesson study activity.

Keywords: running dictation, students' response, lesson study activity.

## **The Development Of Project Teaching Model Towards Students' Culinary Feature Writing Skill In Development Writing Skill Subject**

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### **Abstract**

One of unique writings published in newspaper is feature. This type of writing is one of text types that has to be acquired by students. Higher education students need to be treated to understand types of text to know the development of their idea in more detail through the generic structure and language features. The development of Project-Copy the Master (PC the Master) based on Lesson Study in writing a culinary feature was conducted in three cycles. Every cycle and then the students were given culinary feature master texts (authentic texts) that were used as the guidance for them on how their writings constructed. The students were asked to set up a culinary project to build the basic path to their writings. This culinary feature texts were written by students throughout the consideration of pattern of organization of culinary feature master. This study aimed to 1) describe the result of students' writing of a culinary feature from implementing a teaching model namely PC The Master based on Lesson Study and 2) describe the development of Project-Copy the Master (PC the Master) teaching model based on lesson study in writing a culinary feature. The data were gained from the result of administering test, observation, and questionnaire. It is summed up that in the first cycle the category for the excellent performer was 15%, the category for good performer was 35%, and the category for low performer was 50%. In the second cycle, the category for the excellent performer was 35.71%, the category for good performer was 50%, and the category for low performer was 15.29%. In the third cycle, the category for the excellent performer was 22.22%, the category for good performer was 77.78%. It indicates that the students' achievement has increased in the third cycle. Generally, the result from observation and questionnaire showed that there was an improvement of an activity in acquiring text organization based on master and example, an activity in collaborating on a project over the group activity, developing an interesting title, materials of a culinary feature.

Key words: texts, culinary feature, writing

## **Developing Students Critical Thinking Ability Through Lesson Study**

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### **Abstract**

The ability of critical thinking is one of important aspects to make the students literate in many subjects especially in mathematics. This ability is very necessary to the community, and it is very important in mathematics, not only for those who will explore or learn mathematics, but also for those who will apply in other studies and in everyday life. Learn to think critically means using mental processes, such as attention, categorize, selection, and rate/decide. Critical thinking ability in giving proper guidance in thinking and working, and assist in determining the relationship between the material with more material. Critical thinking skills very needed in solving the problem / solution search, and task completion. Therefore, schools should be responsible to develop and evaluate critical thinking skills through teaching and learning process in schools. This study aims to identify the effects of mathematical learning based on lesson study to critical thinking skills at junior high school students in Bengkulu. This study involved a total of 33 students grade 8 state junior high school (SMPN 11) in Bengkulu in academic year 2017-2018. The design of the study was descriptive qualitative method. The data in this study were analyzed descriptively. The study found that there are effects of the use of lesson study activity to enhance the ability of critical thinking skills in mathematics students in all three components, namely, identifying and interpreting information, information analysis, and evaluate of evidence and argument. Keyword: critical thinking, lesson study.

Keywords: critical thinking, lesson study

## **Students' Interaction in The Environmental Sciences Classroom: Implementation of Argumentation Real-World Inquiry Model**

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### **Abstract**

This study aims to describe students' interaction in the Environmental Sciences course which applied Argumentation Real-World Inquiry learning model. This experimental study used The One Group Pretest-Posttest Design and involved 20 first-year students as participants. Observation sheet and questionnaire were used as research instruments to obtain the data of students' interaction during course session. Implementation of Argumentation Real-World Inquiry model consists of 5 steps: Orientation, Manipulation, Generalization, Verification, and Application. Each step of the model involved students in group discussion and argumentation activities. The results showed that most of the students were able to interact and propose their opinion during small group discussion, but only some of the students which able to have good interaction and argumentation during debate session in the Generalization step. Some of them were not able to share their opinion or ideas in the class discussion. Based on the students' questionnaire, students did not familiar with debate activity. This can be the caused of lack of students in arguing and interacting during debate session. These results indicated that students' ability on interaction and argumentation need to be accustomed not only to the small-scale group but also in the large-scale group such as class discussion or debate.

**Keywords:** Students' interaction, Argumentation Real-World Inquiry, Environmental Sciences

## **Effectivity of Student Book Based on Ethnobiology of Biodiversity Matter To train Critical Thinking Skill**

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### **Abstract**

The purposes of the research are to describe effectivity of Student book based ethnobiology on biodiversity to train critical thinking skills for students. The effectiveness of student book obtained by the method of test learning result and student response. Test learning result using pre-test and post-test instuments. Improving learning result showed by gain score test. While the student response is obtained by spread of student response questionnaire. The Student book that have been developed implemented to 20 students of class X Science-2 SMA Negeri 1 Lamongan. The effectivity is showed by test result get an avarage 85 with complete category, while avarage of gain score is 0,72 with high category. Responses of students get 98,2% is very positive

Keywords: Student book, ethnobiology, biodiversity, ethnobiology, critical thinking skill

**Implementation Lesson Study Assisted Learning Management System Moodle- in Efforts to Improve Learning Outcomes in Courses Review of Junior High School Mathematics Material at Faculty of Teacher Training Education Pancasakti University Tegal**

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**Abstract**

Review of junior high school mathematics material courses is a compulsory subject in the Mathematics Education Study Program. Through this course, students are provided with skills in teaching mathematics at junior high school. Students are not only able to master junior high school mathematics material but must have the skills to deliver the material. The purpose of this study was to find out how to implement Lesson Study in an effort to improve student learning outcomes in the LMS Moodle-assisted mathematics material study review course and to describe the improvement in learning outcomes caused by the implementation of lesson study assisted the LMS Moodle. LMS Moodle is a web-based application that provides online learning services, this is in line with the current digital era. Data collection techniques through interviews, observation, documentation and tests. Data analysis techniques using interactive analysis techniques which consist of 3 components, namely data reduction, data presentation and conclusion drawing. The results of the study showed an increase in the learning outcomes of the subjects of junior high school mathematics material studies in each cycle, which included cognitive, affective and psychomotor aspects after conducting learning activities. This proves that the implementation of the lesson study assisted Learning Management System Moodle is able to improve student learning outcomes in the study of junior high school mathematics material studies.

Keywords: Lesson Study; Learning Management System Moodle; Learning Outcomes.



## **Strategy of jumping task implementation to improve student activeness, collaboration and conceptual knowledge in learning practice base on lesson study**

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### **Abstract**

Jumping task, the term that is popular among practitioners of lesson study in Japan referred to instructional task or learning task, is the basic instructional and instrument of learning process in the classroom. Jumping task can influence student learning by directing the student focus and attention to the particular content in learning process. This study aims to find the right strategy of implantation jumping task to improve student' activeness, collaboration and conceptual knowledge in learning practice base on lesson study. This was a case study on subject of Human Anatomy and Physiology at department biology education of Muhammadiyah University, Bengkulu. The sample were sixth semester students that grouped into three classes. One class of student experienced the lecture with jumping task implementation with lesson study approach. The rest of classes treated as control. The jumping task were designed and categorized according to cognitive level and quantity of task. Several tasks were given to students and worked simultaneously or gradually one by one task. Student activeness, collaboration in their group, and explaining ability were observed during learning process. Student' conceptual knowledge was measured through their result of task that submitted individually at the end of discourse. The result showed that jumping task directed student actively to learn and explain their concept of particular knowledge content. However, both the student' activeness to use and explore learning media to resolve the task and explaining ability were not influenced by the different level difficulty and the quantity of jumping task as well as the way of task was given to student either simultaneously or gradually. High difficulty of task affects the increase student' collaboration to solve the problem when a little quantity or task was given. The more quantity of task has also the same effect to student' collaboration when it was given gradually. The level of jumping task that was packed in a few quantity of task influence the better conceptual knowledge of student. Therefore, the high difficulty of task of particular topic of lecture should be packed concisely rather than more quantity of task to foster student' activeness, collaboration and conceptual knowledge.

Keywords: conceptual knowledge; collaboration; instructional task; jumping task; lesson study

## **An outing: a creative teaching to motivate and engage students in learning English productive skills**

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### **Abstract**

It is generally believed that productive skills, writing and speaking, are the utmost difficult language skill to accomplish. In addition, some English lecturers experience difficulties to motivate and encourage their students to write and speak. There are a number of reasons why sometimes many English language learners find it difficult to perform writing and speaking skills. One of the reasons is that they are sometimes asked to write and speak about the topics they have little knowledge of. Another reason is if they are not interested in the topics they are asked to write and speak about. This paper aims at describing one way in which English lecturers can help their students get as much out of activity as possible despite their writing and speaking experiences, namely an outing. An outing is a great way of encouraging and motivating the students to practice their writing and speaking skills. It is a kind of creative teaching activities that can be used to foster the students communication and collaboration skills. Furthermore, time management and problem solving ability of the students can be enhanced through an outing. Data of the research were obtained through direct observation of an outing and written tasks performed by 36 of the fourth semester students of English Education Study Program, in academic year 2015/2016 at Palopo Cokroaminoto University. Data obtained were analyzed qualitatively. The result of the research reveals that an outing is an appropriate way for tackling the written and speaking tasks which are sometimes daunting for English language learners to perform. Such activity facilitates the students to write and speak enthusiastically since the students know the subject matter they are writing and speaking about. In addition, through several activities in an outing, the students can develop their vocabulary command, increase their grammatical knowledge, develop their English language skills in general and build up their self-confidence, particularly in performing writing and speaking tasks.

Keywords: outing; motivate; engage; teaching writing

## **Analysis of classroom learning management systems to improve communication and collaboration skills.**

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### Abstract

Research has been conducted on the learning community in SMA N 3 Surakarta. Students with high academic abilities have a tendency to master activities in their groups. Class management is carried out so students who have high intellectual abilities can share with students from the group below. This research was conducted in SMA Negeri 3 Surakarta class XI with a qualitative descriptive method. Thirty students and a teacher were included in this study. The results showed: 1) group formation influences student learning activities. Two or more students who have high intellectual abilities or are very high and equal tend to master the group. But if one group consists of one student with high or very high ability, is able to share with his friends better. 2) Student learning activities of one group consisting of four students more than one group of three or five students. Four students study in one group when group discussion is divided into two groups, both of which are equally active in the discussion.

Keywords: LSLC, Collaboration, Communication

## **Exploring the Inquiry Laboratory and Student Collaboration through Lesson Study for Learning Community**

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### **Abstract**

The main objective of our exploration study is to investigate the collaboration of junior high school students during experiments in a natural science laboratory with an inquiry laboratory. This analysis is approached from two main analytical dimensions: (i) cognitive processing; and (ii) social processing. According to our results, which are based on qualitative analysis of direct observations from different groups of students working in natural science laboratories, experiments involving levels of inquiry that students engage in proposing ideas, asking questions and answering questions to each other. The analysis is carried out in a central role in most of the observed collaboration in the lab. Three major modes of procedural thinking are observed across all types of experiments: procedural; interpretative; and exploratory. Overall, students were focused on handling, organizing, or executing experimental tasks. Only small of observed were related to exploratory activities, which included suggesting and exploring experimental alternatives; and also for student interactions involved interpretive work (i.e. generating explanations or building arguments). And then three major modes of social processing are observed across all types of experiments: domination; tutoring; and confusion. In general, our results highlight problems that can help identify strategies for better support in the laboratory.

Keywords: Inquiry Laboratory, Student Collaboration, Lesson Study

## **Improving Professional Commitment Through Development of Organizational Climate and Self-Efficiency**

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### **Abstract**

The teacher's commitment of his profession is one of the important factors that determines the quality of teachers in schools. Based on preliminary research surveys, teacher commitment to the profession is still low. This study aims to find out how the commitment of teachers to their profession can be improved, by researching and seeking relationships on: 1) organizational climate with professional commitment; 2) organizational climate with professional commitment; 3) organizational climate and self-efficacy with professional commitment. This research was conducted on a sample of 133 teachers of Private Vocational Schools in South Jakarta, which was chosen by proportional random sampling spread in 11 of Private Vocational Schools. This research is conducted by survey method with correlational approach. The conclusion of this research are: 1) There is a positive relationship between organizational climate with professional commitment. 2) There is a positive relationship between self-efficacy and professional commitment, 3) There is a positive relationship between organizational climate and self-efficacy with professional commitment. Increased professional commitment can be made through improvements in organizational climate indicators and low self-efficacy

Keywords: Organizational Climate, Self-Efficacy and Professional Commitment

## **Teachers learn as children learn. Lesson study implementation in SD Gagas Ceria Bandung**

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### **Abstract**

SD GagasCeria has implemented Lesson Study since 2009 and approximately 9 years the school has made Lesson Study as part of teacher development programs. This year the school leader tries to take a different approach in determining what topics will be deepened and studied together for the next year. As children, when designing learning activities in the classroom, the teacher will try to ensure that the learning objectives are the child's goals for learning. This becomes important so that during the learning process children feel they have the process and are more involved. Learning drive comes from the child himself because of curiosity or wanting to solve a problem. This is what we tried to implement in the series of lesson studies this year, the teacher determines the goals and topics of joint learning. Then the teacher finds out and answers himself. The process starts from a joint discussion activity at the beginning of the semester, discusses the dream class of each teacher, then imagines the 3 problems in the class that want to be resolved immediately, from the conical into a research question. The chosen research question is how to build children's listening skills and teachers? What is the listening skill? How to listen to each other that is built between teacher and child in the class. We choose this topic together because it can build learning communities that listen to each other. At the end of the year, it is found that the understanding that listening skills are not just giving instructions to children about the tasks that will be done, but also how to listen to the needs of children in class, how to listen to children responses when doing their tasks, how to predict the possibilities of responses that children will make, how build a dialogue process in the classroom so that a community of mutual listening, respect, knowledge of each other.

Keywords: Teachers development, research question, teacher learning

## **Task-Based Performance to Improve Students' Competence Holistically in Cross Culture and Literature Learning (CCLL) Class**

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### **Abstract**

Task-Based Performance is classified as one of tasks demanding teachers to equip with them a rubric as an alternative assessment and requiring students to perform comprehensively to related competences. This study is designed through classroom action research to determine a strategy on how Task-based performance magnifies students' presentation or performance skill, self confidence, independent learning, and critical thinking in CCLL class. Those students' trait are scrutinized using quantitative and qualitative method. Quantitatively, it concerns with obtaining data on students' critical thinking and qualitatively, it deals with data centralizing on students' presentation or performance skill, self confidence, and independent learning. Several tools such as observation sheet, rubrics, students' sheets are employed to depict students' competence. The finding reveals that guided question and answer session within and without the group foster students' higher order thinking skills and the results of the tests indicates significant upgrading. Group performance activity cultivates students' presentation skills, confidence, and independence. Task-based performance works well when students and teachers play their roles both cooperatively and collaboratively to stipulate interactive atmosphere to occur.

Keywords: Presentation, Task-based performance, CCLL

## **21st Century Learning Through Open Problem-Solving Case Study in Sumedang District Lesson Study Forum Open Class**

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### **Abstract**

The 2013 curriculum requires learning based on 21st-century learning. As for us, members of the Sumedang District Lesson Study Forum consisting of teachers, principals, UPI lecturers and Sumedang District education office staff always carry out open lessons that focus on the open problem-solving in it has fulfilled the elements of 21st-century learning elements. This paper tells of four lessons that use open problem solving which results can make all students in the class happy to learn because all students who have different levels of knowledge and abilities can be accommodated in learning. The curriculum of 2013 requires lessons learned based on 21st-century learning. As for us, members of the Lesson Study Forum of Sumedang Regency consist of teachers, principals, lecturers of UPI and staff of education offices of Sumedang Regency always carry out the open Lesson that focuses on the problem solving openly which has met the elements of the 21st-century learning element. This paper tells four lessons that use open-ended problem solving that can make all students in the class happy to learn from different levels of knowledge and ability to be accommodated in learning.

Keywords: accommodate all students learn



## **The Challenges Faced by the Model Teachers in Implementing Lesson Study.**

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### **Abstract**

Previous study has shown that through implementation of Lesson Study can give a good impact both of teachers and students, because through Lesson Study they can bind up a Learning Community as a medium to improve their self development in teaching and learning. In addition, teachers and students prefer Lesson Study has to be a sustainable activity in a school. However, although Lesson Study has given a positive value on its' practices, it does not mean there are no challenges or difficulties faced by the model teachers when implementing it. The main purpose of this study is trying to reveal the challenges faced by the model teacher as long as implementation of Lesson Study practices. This study was a descriptive study, where the data were collected by interviewing 11 model teachers who teach in four different schools. The interview is given after conducting Lesson Study practices that cover three phases namely PLAN, DO and SEE. And the finding of the study reveals that most of model teachers faced challenges in two phases of Lesson Study namely in PLAN phase and DO phase. From PLAN phase, model teachers stated that they are difficult in designing Chapter Design because they didn't understand well how to put their idea on it, and the second, they are difficult in adapting what they have written in Chapter Design and their activity when doing Opening Class. Next from DO phase, most of model teachers stated that basically Lesson Study has a big impact in increasing their students' understanding about learning materials, but the students were not active enough in the teaching and learning process, it means the model teachers have to do a big effort to make their students more active in the classroom activities, and based the interview results, it caused by the observer presence in the classroom, so the students need more habituation about Lesson Study activity.

Key Words : Challenges, Model Teachers, Lesson Study.

## **Students' Perception On Implementing Lslc (Lesson Study For Learning Community)**

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### **Abstract**

Abstract This study aims to determine students' responses and perceptions regarded to the implementation of Lesson Study for Learning Community (LSLC). This research was conducted in the Civic Education Program, Indonesian Language and Education Program, and Geography program of FKIP, Muhammadiyah University of Mataram in academic year 2016/2017 and 2017/2018. The respondents of the research were 4 and 5 semester students in those three study programs. The data was collected through questionnaires and interviews. Then the data analyzed used percentages. Based on the results of the study, it can be concluded that the students' perception in implementing LSLC in the classroom was responded very positive. The lectures designed LS activities dynamically and fun, LS also provides benefits in the terms of improving the ability of lecturers' model and students in learning process as well as the improvement of students' knowledge. LS was attracted the students because it useful in the learning process. LS atmosphere was different from ordinary lectures so far. In the beginning of LS was a bit awkward because many lecturers observed, but after a while it became normal and even motivated them to be active in learning process, and then became more innovative and purposeful.

Keywords: Learning, LSLC

## **How Can Teachers Become Good "Listeners" for Students?**

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### **Abstract**

SD GagasCeria has been carrying out regular lesson study since 2009. The purpose of lesson study at SD GagasCeria in 2017-2018 is as one of the researches on how to train children's listening skills and teach listening skills. It is still often heard that in the teaching and learning process, students must be trained in order to be able to focus on learning and students are asked to listen well to what is said by the teacher. In the context of humanizing the relationship between the teacher and students, then this is no longer absolutely applied, but "mutual" understanding each other, listening to each other. Students listen to the teacher, so the teacher must be able to listen to students. This is the challenge, how to build a paradigm that children's voice is important. When learning, teaching listening skills are important in building relationships with students in the classroom. What for? To train our sense of understanding children's needs. Understanding the needs of children by listening to one child, a group of children, children in one class, to the extent we understand the needs of children by listening to things that are not spoken / not heard from children. In one open lesson, namely, grade 1 ICT learning at GagasCeria Elementary School, the teacher gives 2 assignments to children. From these two assignments, the teacher predicts that children will have difficulty in the first assignment. However, based on the data submitted by the observers during the post-lesson discussion (PLD), the children had difficulty in the second assignment. This is not observed by the teacher so that the interventions made by teachers towards children become inappropriate. From this learning, I learned that communication is the most important thing that cannot be separated in the teaching and learning process in the classroom between teachers and students, students and students. In communicating, not just talking the most important, but far more important in communication is how we can hear things that are being communicated. So in communication, listening skills are the main things that need to be considered and trained so that the purpose of communication can be achieved. Lesson study can be a learning place for teachers to practice listening skills to understand the needs of each child. Through the eyes of observers during the lesson study activities, teachers, especially model teachers, can learn how to "listen" to the needs of students while learning, so that they can provide appropriate interventions according to the needs of children.

Keywords : LSLC, post lesson discussion, communication

## **Implementation of Lesson Study for Learning Community to Build A Culture of Learning Quality (Case Study on Students of The Faculty of Mathematics and Natural Sciences)**

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### **ABSTRACT**

Lecturers as professional educators must have idealism and high morale, can work professionally, especially in designing the teaching program and carry out the learning process and can provide "expert service" according to the progress of science and technology. Research on the Development of Lesson Study for Learning Community to improve Lecturer Empowerment and Quality of Innovation Learning in FMIPA of Universitas Pakuan has been done for all study programs with the design and learning tools in accordance with KKNi. The purpose of this study is to improve the quality of learning innovation, to build learning communities among lecturers, among students, and to determine innovative learning models that are appropriate to the conditions and situations in each study program. The object of the research is the students who follow the lectures on even semesters in 2016-2017 from five study program, namely Biology, Chemistry, Mathematics, Computer Science, and Pharmacy. Research of Lesson study was conducted by combining three cycles in three stages of learning, namely plan, do, and see, with classroom management using Contextual Teaching and Learning as well as Problem Based Learning. The results showed that, all the learning stages that include the cognitive, affective, psychomotoric sphere has successfully invited students enthusiastically from the beginning to the end of learning, seen a significant increase in the value of completeness reached 91%. The implementation of lesson study during this research has also strengthened the collectivity between the lesson study team, establishing mutual learning, learning community among lecturers in each study program, and improving the professionalism of lecturers as educators in order to implement the Tridharma of Higher Education.

Keywords: empowerment of lecturers, quality of instructional innovation, FMIPA-UNPAK

## **Planning for Lesson Study-Based HOTS Learning Development**

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### **Abstract**

The purpose of this study : 1). The describe HOTS learning for fourth grade students in elementary school. 2). Developing HOTS learning planning designs based on Lesson Study for elementary school students. This research method uses a caulitative and quantitative approach with the type of R & D research. This research was conducted at elementary schools in Kudus Regency. Research methods with interviews and observations and questionnaires. Data analysis uses descriptive analysis. In the preliminary study HOTS learning profiles in elementary schools were still weak. The HOTS concept is still poorly understood by teachers and students. Learning is still on LOTS and MOTS. In learning planning, it is seen from the goal of the 95% knowledge aspect at LOTS and MOTS levels. The learning process is 76% at MOTS level and 80.2% evaluation is still at LOTS and MOTS levels. The HOTS-based Learning Study Planning design that was developed consisted of Need Analysis, Conducting KD Analysis, Preparing Learning Objectives, Preparing Learning Materials, Establishing Learning Methods and Models, Developing Media, Preparing Evaluation Instruments. The HOTS learning design lesson-based learning developed consists of model syntax: 1. Delivering learning objectives (previous objectives are prepared with students and parents, learning objectives in their KD in the LOTS-MOTS level still create HOTS enrichment indicators). 2). Students analyze the relationship between facts related to the subject matter. 3. Students create charts or symbols that explain the relationship between facts; .4). Students evaluate existing facts 5) Make conclusions for the first phase 6) Convey creative opinions and ideas related to the material / facts. 7 Summing up the second stage. 8). Evaluation of cognitive aspects. Parents and observers can provide input at each planning stage and HOTS learning syntax

Keywords: Lesson Study, HOTS learning

**Implementation of Problem Based Learning (PBL) assisted by E-Learning through Lesson Study Activities to improve the quality of learning in Physics Learning Planning Courses.**

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**Abstract**

This study aims to improve the quality of learning in physics learning planning courses through the implementation of Problem Based Learning (PBL) assisted by E-Learning through Lesson Study activities. This type of research is qualitative research through the stages of Lesson Study activities. The research data was obtained through the test instruments of student learning outcomes given before and after learning, student activity observation sheets, interview guidelines, and documentation in the form of video recordings during the implementation of the open class. Data were analyzed through Rasch modeling with the help of Winstep and Facet applications to analyze learning outcomes and student responses after learning. Lesson Study activities consist of three stages of activity in each cycle, namely Planning (Plan), Implementation (Do), and Reflection (See). In the Plan stage, discussions with the lecturer team are conducted to develop the Semester Learning Plan (RPS), Chapter Design, and Lesson Plan. In the Do stage, learning is done by model lecturers based on the RPS that has been prepared. In the See stage, reflection is done to find out weaknesses and strengths during learning which is then followed up on further learning. The results showed that student learning outcomes increased, students' perceptions of good learning and the atmosphere of learning seemed very pleasant. Therefore, it can be concluded that through the implementation of Problem Based Learning (PBL) assisted by E-Learning through Lesson Study activities can improve the quality of learning in physics learning planning subjects.

Keywords: PBL, E-Learning, Lesson Study, and quality of learning

## **Improving Students' achievement by Implementing Cooperative Learning Type Two Stay Two Stray on Circulation System material in Senior High School Using Lesson Study**

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### **Abstract**

This current study aimed at describing the activity of the students and teachers in the cooperative learning model type Two Stay Two Stray (TS-TS) on Circulation System Material, to describing the improvement of students' achievement on circulation system material. This research was conducted at XI IPA5 class, of SMAN 8 Malang Type of this research is classroom action research (CAR) collaborated with Lesson Study learning community that incorporated Plan-Do-See stages, with two cycle. The instrument used to measure the success of the TS-TS model and student's achievement on circulation system with the observation sheet of teacher and student activities. There are 32 students in class. The data has been collected, then analyzed descriptively qualitative and quantitative. The result of this research shows the activity of the students and teachers in the learning model of Two Stay Two Stray in the first cycle of 75.21% and 90.18%; and in cycle II increased to 92.05% and 95.12% percentage improvement of class minimum criteria of mastery learning for cycle one, from 71.87% to 96.87%. Meanwhile, in cycle two there is 18.72% students' score improvement on group discussion, it is improved from 10.93% in cycle one to 85.93% in cycle two. Therefore it can be inferred that the implementation of cooperative learning model type two stay two stray can improve the students' achievement on circulation system material.

**Keywords:** Two Stay Two Stray, Students' achievement, Lesson Study

**IbM Implementation of Integrater character that learning disobey chemistry and biology is lesson study base because of conctructive intelligence student SMA Parigi Moutong dan SMA Kota Palu**

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**Abstract**

The front side problem an Indonesian moment is learned kwalky and student power kompetision is low. Most important therefore is not enough profesionalisme teaching in the kuality learned to perform. The aim activity is to implementation integraterd character that learning disobey chemistry and biology is LS base of conctructive intelligence student SMA Parigi Moutong and SMA Kota Palu. The methods of performance is compared training to organize, to plan, dan do base LS integrated character learned. Siclus implementation ia plan, do/open class, and see/reflection and in a negotiation. Result is to be found are respectively 40 chemistry teacher person and 30 biology teacher person at SMA Parigi Moutong and SMA Kota Palu can plan, do/open class integrated character disobey Lesson study. Indicator one of something or the other is chemistry teacher and biology teacher can be to apper as model teacher and as observer. Sentence expretion that sentence at moment reflection/see very bright at all to guide for always to pay attention to difficulty student learned successful all student until. Because of learned that performance more to have a meaning

**Keywords:** integrated character, learning, Lesson study, and intelligence



## **Making Biopories in Application of Problem Base Learning to Improve Adiwiyata Insights in Students**

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### **Abstract**

The number of infiltration wells in Beji 2 Junior High School is still 2 pieces. The number of biopores is 26. This amount is insufficient when compared to the size of the school area with a total of 18 classes plus the growth of hundreds of large and small trees in the open space. Behavioral awareness about the importance of adiwiyata needs to be implemented in learning related to efforts to fight unpleasant odors from the TPA (Final Disposal Site) near the land of Beji 2 Junior High School. Thus, it is necessary to apply the Learning Base Problem Learning model that can encourage and foster environmental awareness. Biopori making by students in groups is one of its efforts. The research approach used in this study is qualitative research with qualitative descriptive research. The research procedure in this study is initial observation, conducting research, data analysis and drawing conclusions, and reporting. Data collection techniques used are observation, interviews, and documentation. The instrument used for data retrieval is the ability to explain and group performance rubric. The application of Problem Base Learning can improve the ability to solve everyday environmental problems while increasing awareness of saving the environment for Beji 2 Junior High School students. Before learning, 4 children from 32 students could answer the importance of biopori. After students discuss, make biopori and put it in the right place in the school environment, 28 students can explain biopori function well.

Keywords: Biopori, Problem Base Learning, Adiwiyata

## **Students Ability in Completing the Questioning of Analysis with Lesson Study Learning Community**

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### **Abstract**

Students often have difficulty when completing analysis level questions. The study aims to empowering students' abilities in solving analysis problems with lesson study learning community. The study was carried out involving as many as 36 high school students in the Biology subject mater of the concept of genetic material. The concept of genetic material includes the concept of chromosomes, gene concepts, protein synthesis and differences in protein synthesis in procaryotic and eukaryotic organisms. Components of analytical problems that students solve include analysis of elements or elements of the concept of learning material, the relationship between parts of the concept of learning material, and organization between concepts of learning material genetic material. Analysis of students' abilities in solving analytical problems is done through video test and analysis methods. Research shows that there is an increase in students in solving significant genetic material analysis problems through lesson study learning community. The results of video analysis also show an increase in student interaction during learning between students and students, students with teachers, and students with learning resources,

Key Words: Analysis, genetic material, lesson study learning community

## **Scaffolding Learning Community Through The Implementation of Lesson Study in Biology Education Study Program Pakuan University**

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### **Abstract**

This study aims to describe the implementation of Lesson Study for Learning Community in Biology Education Study Program, Faculty of Teacher Training and Education, Pakuan University. The Biology Education study program started lesson study since received a grant from the Ministry of Research and Higher Education in 2012, and still consistently apply lesson study until now eventhough the grand has ended. No less than three courses implemented lesson study in every semester. This can be caused by a high commitment of the lecturers to improve their learning quality. Based on the results of observation and questionnaire on courses which carried out lesson study, the lecturers felt positive impacts such as: 1) implementation of lectures facilitates all students to learn; 2) enhancement the quality of learning process and results; and 3) establishment of learning community for both students and lecturers. These were followed by an increase in lecturer activities for research and scientific publication in seminars and journals. Similarly to students, their learning motivation and enthusiasm were increased significantly. These indicated that the implementation of lesson study in Biology Education study program has succeeded in scaffolding a learning community for both lecturers and students.

Keywords: Learning Community, Lesson Study, Biology Education Study Program

## **IBL (Inquiry-Based Learning) Learning Implementation Through Lesson Study On Cross-Interest Of Biology Interest In Safe 20 Bandung**

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### **Abstract**

Learning biology as part of science learning through the inquiry approach is expected to foster and develop students' knowledge, and develop students' basic scientific skills. The implementation of Inquiry-Based Learning (IBL) -based biology was carried out through lesson study in the Social Sciences class X which participated in a cross-interest program with biodiversity material. The teacher carries out the learning with the steps of the Inquiry Learning Sequence learning model that is in accordance with the characteristics of the biodiversity material, namely discovery learning, interactive demonstration, inquiry lesson, and inquiry laboratory. Biology learning with an inquiry approach that is carried out in X IPS classes on cross-interest programs, can train students to perform basic scientific skills in learning, observation, collecting data, analyzing data, and communicating the results of data analysis well. Based on the observations made during the IBL-based learning process, the teacher is able to improve students' understanding of biodiversity material, students can demonstrate the ability to be actively involved in learning, both verbally when there is a discussion, as well as in writing when students actively fill out the student activity sheets provided teacher.

Keyword: Inquiry Learning Sequence, Inquiry Based Learning, Basic Scientific Skills

## **The Implementntation of Discovery Learning Method Through Lesson Study To Increase Learning Interest and Learning Achievement**

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### **Abstract**

This study aimed at increasing learning interest and learning achievement of learners by applying discovery learning method through lesson study on the subject of work and energy for the X class in SMAN 1 Wanasaba in the school year 2017/2018. This research was an action research through the lesson study. Data collection techniques used were tests, observations, and questionnaire of interest to the learner's learning interest. Data analysis in this research was descriptive statistics of quantitative approach. Based on the results, it can be concluded that the introduction of the discovery learning method through lesson study can increase the learning interest and learning achievement of learners on the subject of work and energy for the X class in SMAN 1 Wanasaba in the school year 2017/2018. The average score of learning interest of learners increased for the first cycles was 81.85 was high category to the 84.1 in the second cycle. With classical completeness 74.03% to the average value 84.1 and classical completeness 96.3% in the second cycle. This showed that the classical completeness in the first cycle had not been reached  $\geq 80\%$ , while in the cycle showed that the classical completeness had been reached that was  $> 80\%$ . Therefore, The application of discovery learning method through lesson study can increase learning interest and learning achievement of learners on the subject of work and energy X class of SMAN 1 Wanasaba.

Keywords: discovery learning method, lesson study, interest, learning achievement.

## **Implementation of Lesson Study: In Internship Program for Prospective Teacher Student**

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### **Abstract**

An internship program is one of the programs implemented by universities that have educational study programs. This internship program is carried out in a short time and does not provide a lot of time for prospective teacher students to get experiences as a teacher. For this reason, it is necessary to have an effective internship scheme to find optimal results. One effort that can be done is to implement the Lesson Study in the Internship Program. Implementation of Lesson Study in internship programs needs to be designed so that students can carry out the result maximally. This article contains ideas for implementing Lesson Study that can be applied in an internship program. The implementation of Lesson Study in the internship program contains the phase of Orientation, Observation, Action, and Reporting. The orientation phase includes the activity of briefing the implementation of the internship program, the technical implementation of Lesson Study practices, reporting, and its Assessment. The observation phase contains observation activities that are directly carried out by internship students in partner schools. The action phase contains the core activities of Lesson Study Practices, which are Plan, Do, and See. The reporting phase is the activity for reporting of the implementation of Lesson Study that has been applied by internship students in the form of implementation reports and articles/paper for publications.

Keywords: *Lesson Study*, Internship Program, Prospective Teacher Student

## **Fostering Prospective Teachers' Mathematical Disposition: A Lesson Study in Linear Programming Topics embedded with Technology**

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### **Abstract**

In nowadays education and especially in higher level, Mathematical Disposition is one of several factors which are highly affecting learning process. Purpose of this research is to foster Mathematical Disposition towards prospective teachers' through technology approach. POM-QM represents technology embedded into the learning process. Every cycle starts with plan in embedding the technology into the learning, realization of the plan engaging a model teacher and an observer, and then ends with reflection to improve the next learning process to be applied into the other class or the next topic. Pre and post assessment of disposition adopted from Teacher Candidate Disposition Assessment of Wisconsin Lutheran College (2014) then be given to prospective teacher in two parallel classes. Some teaching intervention related to the embedded technology and disposition is also discussed to improve teaching and learning to the topics.

Keywords: Mathematical Disposition; Lesson Study; Linear Programming; Prospective Teachers

## **Lesson Study Implementation Using Cooperative Learning Methods in Writing Advertisement, Slogan And Poster Text To Improve Activities And Creativities Of Junior High School Students**

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### **Abstract**

This research is motivated by learning conditions that are still not optimal, both process and learning outcomes. Therefore, we conducted a study to apply lesson study by using the Cooperative Learning method in Indonesian Language, in writing advertisement, slogans, and posters texts in class VIII of Pasundan 2 Junior High School Bandung. This research is expected to improve learning outcomes, activities and creativities. The research method used is an experimental method. The research subjects were students of Pasundan 2 Bandung Junior High School Class VIII C. This research was an implementation of plan, do and see. The validity of the data is done through triangulation techniques. Based on the results of the study it can be concluded that the application of lesson study using the Cooperative Learning method is carried out in accordance with the stages in the lesson study, namely plan, do and see. Lesson study makes the learning planning process more mature so that in the implementation of learning the model lecturer feels more prepared. Lesson Study can effectively improve the quality of learning, both processes and results. This can be seen from the test results which are tested on the average significant improvement. Likewise in the process, based on the observations made, the activity and creativity of students of Pasundan 2 Junior High School Bandung increased. Thus, it can be concluded that the implementation of lesson study with cooperative learning effectively increases the activity, creativity, and learning outcomes of students in Pasundan 2 Junior High School Bandung significantly.

**Keywords:** Cooperative learning, lesson study, text, advertisements, posters, slogans.



## **Critical Thinking Ability of Students in Practicum Activities of Animal Physiology Subjects Through Lesson Study-Based Predict, Observe and Explain Models (POE)**

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This study aims to improve students' critical thinking skills in the practicum activities of animal physiology courses through Predict, Observe and Explain (POE) models based on Lesson Study. This study uses descriptive research methods, in the material of the heart of frogs and blood vessels. The study was conducted with the stages of Lesson Study-based learning consisting of plan, do and see. The research location was in FKIP UNPAK with the implementation time between May - July 2018. The research subjects were S1 Biology Education Study Program students in grades IV A and IV B who took Animal Physiology courses. Data collection with documentation techniques, observation of lecturer activities, observation of critical thinking skills , interviews with students, and questionnaires. Observation data and the results of critical thinking skills were analyzed descriptively to find out the ability to think critically in students. The results showed that in practical activities Animal Physiology courses can foster critical thinking skills through Predict, Observe and Explain (POE) models based on the lesson study. The ability to think critically can be seen from the students' scores in each cycle. The average value of the highest critical thinking ability of students seen in the indicators analyzing arguments of 88.7 is included in the excellent category. The average value of students' lowest critical thinking ability is seen in the indicators composing considerations of deduction of 75 including in the good category. The results of interviews with students reinforced the evidence that through practical activities through Predict, Observe and Explain (POE) models based on Lesson Study can foster students' critical thinking skills so that in the learning process students are more active, creative and fun.

Keywords: model Predict, Observe and Explain (POE), practicum, Critical Thinking Ability

## **The learning of individual teacher in lesson study collaboration**

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### **Abstract**

This study aimed to investigate how teachers who are participating in lesson study collaboration learn through their participation in discussion during implementing lesson study collaboration by adapting a participatory framework about teacher learning. the researcher uses collective case studies by becoming participant observer and records any various lesson study activities to gain the detail description of two selected teachers who are participating in lesson study collaboration. the interview is also done before and after four round of lesson study. by using the participatory framework, the researcher find significant shifts in the participation of each of the two teachers. finally by comparing these shifts the researcher find significant conditions for teacher's individual learning.

Keywords: lesson study; professional development; learning theories, individual teacher

## **Design Of Authentic Assessment Implementation in Lesson Study-Based Learning At Primary School Teacher Education Department**

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### **Abstract**

The authentic assessment is the process that can provide an overview of students' development. This study will be conducted on how to develop authentic assessments applied to the lesson-study based learning in the Faculty of Teaching and Education Pasundan University. Efforts to develop authentic assessments in lectures have been carried out since 2017 and the results is authentic assessment have not been implemented optimally. The aim of this study is to obtain an authentic assessment model or guide for lectures. Sample in this study is the lecturer of science class at Primary School Teacher Education Departmen. This is a Research and Development (R & D) research. Workshop and focus group discussion (FGD) were conducted to formulate and make authentic assessment instruments on lesson study-based learning. The instruments used are quisionare sheets, worksheet of the lessson study, and interview guides. Data is analyzed by descriptive statistics. The result is that most of the lecturers have been able to formulate the plan of lecture, lesson design based on authentic assessments, and open lesson videos. Further research will be conducted on the dissemination of research results on lectures at FKIP Unpas.

Keywords: Authentic Assessment, Lesson Study

## **Application of Pogil Technique through Lesson Study Activities in Educational Management Courses to Increase Learning Activity**

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### **Abstract**

Facing the industrial revolution era 4.0, the Indonesian people are challenged to prepare experience changes in various sectors, including the education sector. Therefore, Mathlaul Anwar Banten University English Education Study Program as a study program preparing graduates for Industry 4.0 era, must begin designing the learning process so that it can produce graduates who are ready to face the technological era that will be faced. One of the renewals of this learning process can be started by changing the learning paradigm of Teacher Centered Learning (TCL) to Student-Centered Learning (SCL), one of the techniques that can be used is the POGIL technique. POGIL technique (Process-oriented guided-inquiry learning) is a collaborative learning (cooperative, integrated inquiry, metacognition). In order for this POGIL technique to run optimally, it can be done through Lesson Study learning activities. Lesson Study is a model for educating professional development through collaborative and ongoing learning assessment based on the principles of collegiality and mutual learning to improve the quality of learning and build learning communities. This study aims to determine the activity of students by using POGIL technique through Lesson Study learning activities. This research is a quantitative descriptive. The population in this study were all students who took the Education Management Course as many as 25 people. Data collection techniques were carried out using a questionnaire. After the data was collected, the normality test was used using the Shapiro-Wilk test (because the population is less than 100) with a significance level of  $\alpha = 5\%$ , then a t-test of the one-sample test was carried out. Based on the results of data processing carried out using SPSS version 25, the average is 82.24 and the standard deviation is 4.47. Then the normality test was performed and the Sig value was obtained. amounting to 0.549, because of the value of Sig. greater than 0.05, the data is Normal. Then a t-test one-sample test was carried out and obtained t count = 1.734 at a significance level of 5%. The value of the table is obtained from the table of distribution t with dk = 25 is 1.708. So based on the results of data processing and distribution table t it is known that the value of t count = 1.734 > t table = 1.708 at a significance level of 5%. It can be concluded that with the application of POGIL techniques through Lesson Study activities, 80% of students become more active in the process of learning activities in the classroom.

Keywords: POGIL, Lesson Study, Learning Activity

## **Regeneration of The Makers of The Kite With Characters in Muna District, Sulawesi Tenggara, Indonesia.**

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### **Abstract**

Kaghati roo kolope is said to be a kite with characters because it contains values. Its understood by the elderly and limited. Its maker need regenerated through training for elementary school students in Muna Island in 2017. The methods using lecture, discussion, demonstration, the practice of making and planting raw materials provided. Qualitative descriptive data analysis techniques. Training results: according to the habits of the Muna community, Kaghati is a male domain. The participants consisted of male, fourth, fifth and sixth grade elementary school students, but female students watched and were very enthusiastic about listening to the training activity. One participant from the Parigi Customary Village named Anwar was unable to attend because his health was disrupted, so that during the training he was represented by his father, La Sudi. While some parents of other students were present at the training site and teacher were happy with the regeneration of the Kaghati maker. Trainees from not knowing Kaghati became aware and all training participants were able to assemble them. This is because they have been accustomed to assembling and playing kites made from paper. Based on the enthusiasm of the participants, teacher, and parents, we have compiled animated films, textbooks, GBPP, and RPS about Kaghati to support learning materials on local content subjects Culture and Skills (SBK) in Muna Regency. In conclusion, Kaghati roo kolope can maintain its existence because of student, parents and some school teachers are very interested. Especially if it is supported by the local government.

Keywords: local content subjects, regeneration, survival of Kaghati, values

## **Lesson Study in Teacher Education: Preservice Teachers' Perceptions during School Placement Experience in Lampung**

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### **Abstract**

Lesson study in Indonesia has gradually developed and systematically established its existing culture (Suratno, 2012, p. 205). Many studies on the implementation of lesson study in Indonesia have been conducted involving in-service teachers (Apsari, Syathroh & Rizqiya, 2017; Hendayana, Imansyah, Supriatna & Nahasdi, 2014; Suratno & Iskandar, 2010), however the implementation of lesson study in initial teacher education involving preservice teachers is underdeveloped. Therefore, this research aims to explore preservice teachers' perceptions in implementing lesson study during their school placement experience. The study follows a qualitative approach involving 21 preservice teachers of Universitas Bandar Lampung during their school placement July – September 2018. The data are collected through observation notes, questionnaires, and interviews and analyzed through content analysis. The research focuses on preservice teachers' effort in implementing lesson study during their school placement experience, problems they face, and their suggestions for future implementation. The results contribute to deeper understanding on the implementation of lesson study in initial teacher education, especially during preservice teachers' school placements, identification of its challenges, and recommendations for future implementation of lesson study. The results also contribute to existing literature exploring the implementation of Lesson Study within initial teacher education.

Keywords: Lesson study; preservice teacher; teacher education; initial teacher education; school placement.

## **Improving The Quality of Early Childhood Education Teachers Through Lesson Study With Empowerment of Subdistrict School Clusters in Pasuruan District**

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### **Abstract**

The role of the teacher in managing the class determines the success of learning. Quality learning can be formed through professional teachers. A teacher's professional ability is the main capital in learning. The purpose of this report is to explain how the Lesson Study coaching program is implemented to improve the quality of teachers in Kindergarten (TK) Pembina District Bangil. Teacher development using Lesson Study is an alternative chosen by the Pasuruan District Education Office through the Early Childhood Education (PAUD). After observing the background data of teacher graduates, it is different. Of the 40 teachers of lesson study participants in Bangil sub-district, only 2 people graduated from kindergarten education, others from high schools and equivalent. In the implementation of coaching there are no significant constraints, because the place used is open class while in TK the coaches who have more adequate infrastructure. The ability of teachers to observe students is good, they are used to observing TK-PAUD students with detailed descriptions of coming to home. But to improve the quality of teachers with different educational backgrounds, it is very necessary for the Education Office to carry out policies with the guidance program through Lesson Study. The coaching steps implemented were: 1) Lesson Study Workshop, 2) Lesson assistance through PKG Kecamatan

Keywords: Lesson Study, Workshop, Assistance

## **Exploring the challenges of collaborative planning in the implementation of LSLC in Micro Teaching**

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### **Abstract**

This article presents the result of an action research study applying LSLC in Micro Teaching subject. The focus reported here is collaborative planning at PLAN stage. The participants were fifteen students of the English Study Program taking Micro Teaching in the second semester of the 2017 academic year. The data were collected through observation and interview. The students were divided into permanent groups of three to practice the Plan, Do, and See stages of a lesson study. Each group chose three texts to teach. For each text, realizing collaborative planning, each student was required to have some preparation at home (e.g. making teaching scenario, searching for materials, and determining media). In a classroom meeting they discussed collaboratively in their groups, making use of their individual preparation and sharing ideas, and making their own decision. This study reveals some interesting findings. Collaborative planning improved the students' confidence, creativity, and their teaching performance. In spite of that, collaborative planning took longer time than expected and there was still a tendency that the high achievers dominated group discussions. More practice and models were needed in order to implement the principles of collaboration in planning a lesson.

**Keywords:** Collaboration, Plan, Micro Teaching, Improvement



## **What Did MGMP based Lesson Study Change in Junior Secondary Schools in Indonesia?**

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### **Abstract**

The MGMP based Lesson Study was introduced in 2006 in Indonesia. It was implemented in 3 districts as a pilot study, then disseminated nationally by the core universities and training organizations under the Ministry of Education. This Study summarized the impact or changes between the baseline survey and the endline survey between from 2006 to 2010 in various factors: MGMP activities in mathematics and science; school management and school culture; lesson's style; students' level of understanding and academic interest; and students' achievement tests. The survey result showed a positive change in some areas, such as: participation level of teachers and principals in MGMP; school management to promote teachers' proficiency in schools; and school culture to be more open and supportive. But no significant change was observed in principals' leadership and in culture such as teachers' supportive care for students. In terms of academic performance, there was a significant increase in science but no change in mathematics. Besides, the averages of the correct answers were not high even in endline survey, 45.71 and 38.88 for mathematics and science respectively, out of 100 scores. When the author looked into data of correct answers in mathematics of the endline survey based on four cognitive domains, (1) knowledge of fact, (2) formulaic calculation, (3) understanding of concept, and (4) reasoning and analysis, the "formulaic calculations" was the lowest. Next lowest was "knowledge of fact", followed by "understanding of concept" and "reasoning and analysis". Based on the findings above, the author concluded that (1) there is a gradual change to challenge in new teaching style for many teachers; and (2) a positive influence was observed in principal and school culture. On the other hand, even after conducting 5 years of lesson study based MGMP, (1) school culture such as teachers' care for students have not changed; (2) mathematical literacy in students remains low compared to international standard; and (3) especially correct answers in "formulaic calculation" and "knowledge of fact" domains are the least. The author analyzed the five weakness or obstruct that prevented to achieve more outcomes. Then the author gives recommendations for policy makers and researchers in Indonesia based on the analysis.

Keywords: MGMP

## **Integrating STEM Elements through System Thinking using a Lesson Study Approach**

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### **Abstract**

Bitara STEM Program was an already established STEM Program in Faculty of Education, UKM. Through this program, various parties such as school students, teachers, and lecturers from various institutions had been trained using the Bitara STEM Module. However, it was observed during the activities and final presentation that the STEM integration had not been fully applied by the participants. They still think of every aspect of the module as separate element. If the integration happened, it is only occurred at the surface level. This can be clearly seen through their presentation during Smart City Activity. Therefore, the researcher proposed a new approach to improve students thinking during STEM activity through system thinking. The system thinking that were incorporated were mainly Cause-Effect Thinking, Closed-looped Thinking, Dynamic Thinking, and Forrest Thinking (Holistic Thinking). The system thinking was inculcated through a set of questioning. The effectiveness of questioning activity could be evaluated through Lesson Study Approach. A carefully planned lesson that was developed collaboratively can be used inculcate System Thinking in students during STEM activities. At the same time, fellow teachers and researches, as well as academicians, can participate in as observers to see the effectiveness of system thinking incorporation in the STEM. Then, during the reflection session, the observation was discussed in order to find the improvements for system thinking incorporation in STEM in order to improve overall STEM Education. It is expected that system thinking through questioning can be used to improve STEM integration by the participants of Bitara STEM Camp.

**Keywords:** Education, Lesson Study, System Thinking, STEM, Questioning

## **The Perspective of Prospective Teachers in Gazing a Qualified Learning**

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### **Abstract**

The aims of this research are namely to describe the qualification of a qualified learning and to analyze the perspective of prospective teacher in gazing a qualified learning. The research method applied is descriptive qualitative. The sources of data are the prospective teachers of the students of Faculty of Teacher Training and Pedagogy at Dwijendra University, Bali. The documents are derived from the distributed questionnaires to 93 students of Faculty of Teacher Training and Pedagogy at Dwijendra University. It used content analysis and questionnaire to collect the data. Moreover, the results of the content analysis and questionnaires were analyzed to figure out the perspective of qualified learning. The final findings of this research shown that 45% students stated teaching learning process is qualified if there are more practical activities than theoretical one, as the students could get direct learning experiences through it. 25% students mentioned that adequate facilities has big impact for qualified learning. 20% of students stated that teachers need to have direct interaction to their students in teaching learning process for a qualified learning. The last but not the least, 10% students mentioned that the teachers has to focus on all of the students in class, not to the selected students only, in teaching learning process to get a qualified learning.

Keywords: Perspective, Prospective Teachers, Qualified Learning