

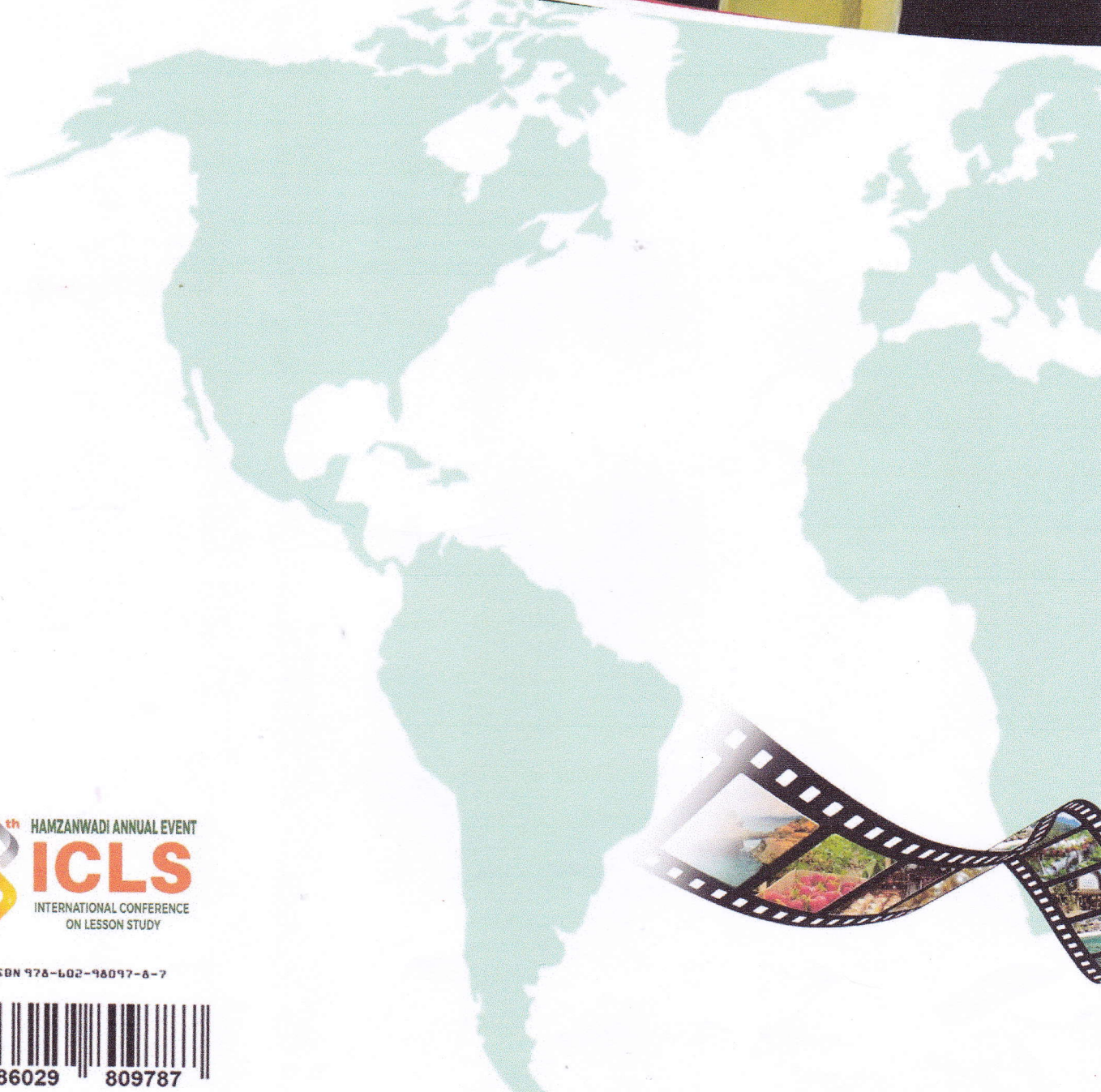


Proceeding International Conference on Lesson Study

5th ICLS
HAMZANWADI ANNUAL EVENT
INTERNATIONAL CONFERENCE
ON LESSON STUDY



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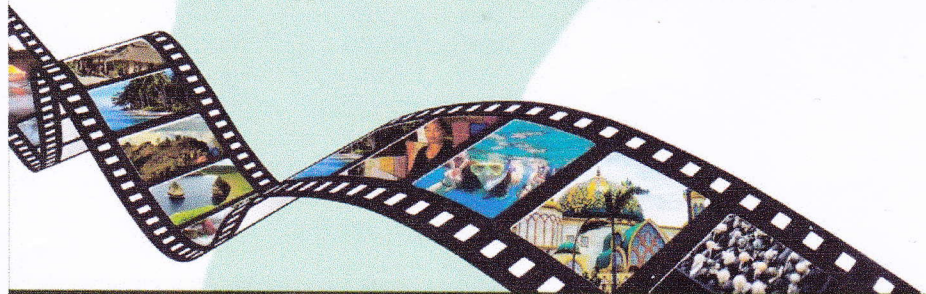
INTERNATIONAL CONFERENCE
ON LESSON STUDY

Proceeding

International Conference on Lesson Study

“Professional Learning Community through
Lesson Study for Promoting Student Learning”

14th. 16th September 2017
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PROCEEDING 8th ICLS

INTERNATIONAL CONFERENCE ON LESSON STUDY

“Professional Learning Community Through Lesson Study for Promoting Student Learning”

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INTRODUCTION

September 11, 2017

The theme of the 8th ICLS is “Professional Learning Community through Lesson Study for promoting student learning” is appropriate to respond the current issues in education, especially the issue related to the quality improvement through teaching and learning process.

This theme is expected to assist/contribute towards the quality improvement through the inclusivity of teaching and learning process that can be gained from many studies of researchers, practioners, workers in education professional learning, school improvement, curriiculum development and other fields that can help to promote its goals.

The ICLS is the annual meeting at Hamzanwadi University in East Lombok West Nusa Tenggara from september 13-16, 2017. This conference is organised by Hamzanwadi University in cooperation with Indonesian Association of Lesson Study (ICLS) and the Ministry of Research, Technology and Higher Education.

We proudly announce that we have invited some experts: Prof. Manabu Sato, Gakushuin Uni, Japa, prof. Petter Duddly (President of WALISUK), Prof. Cristin Lee (NU), Prof. Siriripaane Swanmonka - Chulalongkorn University Thailand., Carly Klein, Windesheim University of Nedherland and Prof. Sumar Hendayana, Ph.D (President of ICLS Indonesia).

We would like to say thank you to all invited speakers and participants who share their ideas to complete the agendas in this conderence, we also provide you to visit some schools as our partners in this Lesson Study.

It is a great honor for us and all commitee to be the host at the 8th ICLS 2017. Welcome to Lombok, have a nice conference and get ready to be inspired and challenged. Thank you.

Khirjan Nahdi

The vice Rector of Academic Division
Hamzanwady University

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Learning Quality Development of Microbiology with Cooperative Model of TSTS through Lesson Study Activity in Biology Education Study Program of University of Papua

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Abstract

The purpose of this Lesson Study activity is to fix the teaching and learning of Microbiology course. The activity was performed in two cycles which each of the open class consisted of three stages of activities; planning/plan, observed learning (do), discussion and reflection (see). Each planning resulted in chapter design, lesson design, and scoring documents with theme and subtheme mentioned. Learning process was designed and performed through the implementation of the cooperative model Two Stay Two Stray (TSTS). The data were collected by observation. According to the result of observation, reflection and data analysis, it could be seen that (1) There was increase of students' activity, creativity and independence; (2) there was an increase in students' understanding on the considered difficult concept. There are several suggestion to improve the learning process of Biology; (1) Lesson study activity is to be frequently and continually performed to develop other subjects' material because it has been proven to raise students' activeness, learning process and results; (2) the continual activity of lesson study is considered able to increase professionalism of teachers, pedagogic aspects and understanding of lesson material or profesional aspects.

Key words: Lesson study, microbiology learning, cooperative TSTS.

A. Introduction

Learning is a process by which a person undertakes to gain a whole new behavioral change, as a result of his own experience in interaction with his environment (Slameto 1995: 2). Considering there is not a perfect learning process, it is always necessary to improve the quality of learning. Further dikti (2008) stressed that the process of learning in the college should prioritize on student centered learning patterns. Some of these descriptions illustrate the importance of active student involvement and interaction among them during the learning process. By that students should be encouraged to have motivation in themselves, then strive to achieve the desired competence.

Competence of microbiology courses, emphasizing on the mastery of concept and application of microbiology concept in everyday life. In the effort to achieve these competencies, it is necessary to design a student-centered learning through cooperative learning type TSTS. Cooperative learning model type Two Stay Two Stray is a group learning system with the aim that students can work together, responsible, mutually help solve problems and encourage each other to excel. This method also trains students to socialize well (Yusiriza, 2010).

According to Suprijono (2009), learning by TSTS method begins with the division of groups. Once the group is formed the teacher assigns tasks in the form of

problems they should discuss the answers. After the group discussion was over, two people from each group left the group to visit the other group. Group members who are not assigned as guests have the obligation of receiving guests from a group. Their job is to present the work of the group to the guest. Two people serving as guests are required to visit all groups. If they have finished their work, they return to their group. After returning to the group of origin, both learners on duty as well as those on duty to receive guests match and discuss the work they have done.

In an effort to apply cooperative learning model TSTS type more effective that leads to the increase of student learning activities, it should be coupled with lesson study (LS). This is very reasonable because the series of activities of LS emphasizes on student learning activities. In addition, the points raised in the reflection phase are authentic data from observations, which serve as a basis for improving the quality of subsequent learning. Although according to Ueno (2013), LS does not give priority to solving problems and difficulties but to share problems, interact, and think to solve problems together. From the description above, shows the importance of developing the quality of learning through lesson study activities as an effort to improve student learning activities and is believed to improve basic knowledge in learning, improve professionalism of educators, and build community of learning communities.

B. Method

The Lesson Study is held from August to September 2017, in the odd semester of academic year 2017-2018. Open Lesson is conducted in Biology Education Study Program, Faculty of Teacher Training and Education, University of Papua. The subjects of the study were semester V students of biology education program programmed Microbiology courses consisting of 29 people consisting of 6 men and 23 women. The discussion groups were formed in five (5) groups with each group of 4-5 students. In each open lesson consists of stage plan, do and see. the activities in the stage *plan done* collaboratively by the *lesson study team*.

Activities at the stage of the plan carried out collaborative activities by the team of lesson study. These activities include identification of microbiology learning problems, review of common learning experiences, preparation of syllabi, design lesson study-based lesson plans that include making lesson design and chapter design, formulating methods, models or learning techniques that will be used, creating teaching materials, making learning media, making student discussion sheets, making observation sheets, and preparing the necessary tools in the learning process and documentation equipment. Tahapan do includes two main activities, namely the implementation and observation of the learning process. Implementation of learning done in accordance with that has been formulated in the stages of the plan. Observation of the learning process is done to find the facts that arise during the learning process. During observation, observers are not allowed to speak to each other. Tahapan see in the form of activities review, evaluation or reflection on the learning process that has been going on. See in this research carried out collaboratively by involving all students of sample class, not only between observer and model lecturer only. Implementation (see) in the form of reflection conducted during the learning process takes place.

Reflection activity led by the moderator concurrently observer / observer. Another observer is 3 lecturers. The discussion is directed at: (1) sharing and analyzing data, (2) achievement of learning objectives and student development, and (3) improvements that need to be made to the design of the learning process. All inputs from the see activities serve as materials to make revisions and improve the stages plan or do in the second cycle. Technique of data collecting done by observation technique to student activity and lecturer model, questionnaire, interview, and audio video technique. The data obtained were analyzed descriptively qualitative.

C. Findings and Discussion

Implementation of Lesson Study

Implementation of Open Class in cycle I is done with introduction theme and History of Microbiology. Learning tools that include Reading materials, RPS, Student Work Sheets (LKM), student cognitive tests, and activity plan sheets have been prepared prior to the activity plan. Plan followed by 4 Lecturers of Biology Education FKIP UNIPA, among others; Jan H. Nunaki, Iwan, AksaminaM.Yohanita, and Silvia H.KusumaSirait. Plan is done in the lecture room of Biology Education Program of FKIP UNIPA.

Do cycle I held on Thursday 31 August 2017 at 08.00 - 10.20 WIT in Room 6 Lt 2 Postgraduate of University of Papua On Introduction Material and history of Microbiology. Lecturer model is Iwan, Observer among others; BenidiktusTanujaya, Jeinne Mumu, Apriani Sulu Parubak, AchmadRanteSuparman, Fredi N. Lohi, Silvia Hanna K. Sirait. The present observer consists of 7 lecturers. In general, learning activities run well at first, students are interested in the apperception described by the model lecturer and follow what is instructed by the model lecturer. At the time of the learning process took place several students are asked by the model lecturer to read the learning objectives so that students look enthusiastic in following the learning because it is involved in the delivery of learning objectives. But when entering the beginning of the material there are some students who seem busy with their own activities, this is because at the beginning of the lecturer delivered the material with the lecture method, the student looks staring at the fore but his eyes look hollow, just some people who look active, after a few minutes later when the model lecturer lure students to ask then the students have started to look enthusiastic next model lecturer divide. Lecturers divide students into 5 groups and each group consists of 4-5 people. The model lecturer then distributes the MFI to be discussed by each group. Each group gets different material to be constructed. Group discussions take place normally, then two people from the host group will visit another group as guests to get an explanation from the host group, then the guest excuse themselves and so on until the back of each group of origin and match the results of information obtained with the group. then each group presents the results of group discussion and other groups can respond. In closing activities the model lecturer directs the students to conclude the lesson.

See Activity (Reflection) is done after Do activity completed by model lecturer. Some suggestions and inputs during the reflection are some students who look

less active like student no.9 in the name of Damianus Wonmut and Paulina who are original Papua students who need special therapy so that students can be active. Some group divisions are also not heterogeneous so there is one group that is almost all less active as mahasiswa No. 3, No. 6 No. 8 and No.11 need to be spread. The group discussion time is still lacking so that the students have not finished yet discussed by the students have moved to other groups. In general, the observer states that the model of learning adopted by the model lecturers is very good because it can provide an opportunity for students to independently be responsible and find the concept of learning through information obtained after a visit to another group. The advantages of open class I are: (1) The Student Worksheet is very interesting and explores the students' ability, (2) most of the learning time has been utilized by the students, (3) the lecturer does not dominate the learning process, and (4) the very apperception interesting and able to arouse student interest (5) the use of TSTS learning model can enable students. Some observer ideas after observation of learning are: (1) arrangement of class discussion by lecturer so that there is no dominance by certain group, (2) U-shaped seating arrangement for lecturer and observer able to observe student activities, (3) use of instructional media more maximized (4) division of heterogeneous student groups so that the ability can be spread so as to help his less fortunate friends.

Plan in the second cycle is done in the lecture room of Biology Education Study Program of University of Papua followed by Iwan as model lecturer, Jan H. Nunaki, Aksamina M. Yohanita, and Silvia Hanna Kusuma Sirat. At this stage learning tools, Student Worksheets, evaluation tools and lesson study observation sheets have been prepared. Trying to approach the students on behalf of Damianus and Paulina, students from Papua to be able to follow his friends to actively discuss. One way to ask him to mention the purpose of learning / lectures. Next time for student discussions is arranged in such a way that it can run well and effectively. The division of groups has been pursued heterogeneously with attention to the background of the ability of the students so that all students are strived to be active in learning activities.

Do Cycle II was held on Tuesday, September 05, 2017 at 10:20 am-12:50 pm in room 6th floor of the University of Papua Postgraduate Building on Bacterial Material. Lecturer model is Iwan, Observer among others; Achmad Rante Suparman, Fredi, Silvia Hanna K. Sirait, Purwati and Sri Wahyu Widyningsih. The attendees were 6 persons. Students interested and listen to the apperception submitted by the model Lecturer because it is associated with real life experienced by the day-to-day by students. At the time of delivery of student learning objectives are involved to read the purpose so that the material is directed. The Model Lecturer delivered the material briefly so that the students looked enthusiastic and attentive. Lecturers then divide the students into 5 groups and each group consists of 4-5 people. The model lecturer then distributes the MFI to be discussed by each group. Each group gets different material to be constructed. Group discussions take place normally, then two people from the host group will visit another group as guests to get an explanation from the host group, then the guest excuse themselves and so on until the back of each group of origin and match the results of information obtained with the group. Then each group presents the results of group discussion and other groups can respond. In the closing activities the

lecturer model directs the students to conclude the learning according to the intended purpose.

See Activity (Reflection) in cycle 2 is done after Do activity completed by model lecturer. Some suggestions and inputs during the reflection include students who in cycle I look less active as student no.9 in the name of Damianus Wonmut and Paulina who is a native Papuan student, after therapy by encouraging to engage in the discussion activity then the student finally become active and have dare to ask and express opinions. The division of the group has been heterogeneously made so that the uniformity of each group, such as students 3, No.6, and No.11 have been spread evenly, but of course some people are still less active. Group discussion time has been added so that group work becomes effective. In general, the observer states that the model of learning adopted by lecturer model is very good because it can provide an opportunity for students to independently responsible and find the concept of learning through information obtained after a visit to another group so that student activity is increased.

The advantages of open class cycle 2 are: (1) the students already understand the taught material, (2) the student can do the MFI and present it well, (3) the lecturer model performs successfully the discussion as facilitator very well. Some observer ideas / ideas after observing the lesson: (1) the seating arrangement is neater, (2) the attention of the lecturers is more comprehensive, especially for the students who are in poor papua origin (3) the class discussion is maximized. Implementation of reflection is recorded some valuable lesson learned, among others, as follows. (1) In the group there must be a passive and active student. This is normal. Not that passive students do not learn, students stay focused on learning activities but only reading the material. If students are not active it is always so in various learning activities should often be motivated. (2). Almost all students are preoccupied with the learning process through the application of Two Stay Two Stray type learning model.

Discussion

Improvement efforts made by lecturer model from cycle I to cycle II in lesson study activities is a way of model lecturers to improve the weaknesses in learning activities using cooperative learning model type Two Stay Two Stray. The effort is done by requesting input from a colleague who acts as an observer in the do activities conducted by the model lecturer. In the first cycle, the group division is not heterogeneous, so some students are not able to discuss with their group's friends. The sitting position in the group is also still not quite right. The learning model is applied in the new sense by the students so that the students are still less familiar with the model. Some students appear less active in learning activities.

Weaknesses found Lecturer model and colleagues (observer) as stated above, increase the motivation Lecturer model to improve it. Improvements made by the model Lecturer in cycle II is to divide the group in a heterogeneous group that is proportional to facilitate Lecturer model in guiding it consists of 4 people in one group. Seating settings that initially appear to be scattered are individually converted into circular seats in the middle allowing observers to observe the activities of the students. The model lecturer asks 2 people of each group to visit another group and 2 people live as guests

and it is the duty to explain to every guest who comes. Every student is less active, then the Model lecturer came to him to provide guidance for them to be active in learning activities. Thus, the above improvements reduce the confusion and difficulty of students in carrying out the whole learning activities. Reduced confusion and difficulties experienced by students to facilitate them in completing the MFI in task.

The above statement in accordance with the statement Susilo (2011) ie lesson study is one of the activities to improve the quality of learning through collaborative activities with colleagues. Syamsuri and Ibrohim (2008) also added that in applying lesson study the teacher seeks to transform the learning process into a qualified and effective learning process by observing and collecting data, seeing how the impacts are assisted by the observer, and further revising the lesson plan for the next learning activity. Observations made by the observers show that by using TSTS learning model in the microbiology course progressively "developed" because the students participated in the activity directly and the model lecturer only served as the facilitator only. The students' activity seems to be getting stronger, it is shown by students who are very enthusiastic in discussing. The above statement in accordance with the opinion Santyasa (2009) that the improvement in improvements in the practice of learning melaksankan course will lead to improving the quality of learning outcomes and student learning products.

Student activity is increased enough not to be separated from the effort of model lecturers together with his colleagues (observer) in improving the learning process. Stage-by-step model lecturers are unrelenting to improve lesson plans, improve teaching methods, and improve ways of observing student activities. The whole activity is done by the model lecturer to improve the quality of the learning it does. The above statement is supported by the question of Ibrohim (2009) that the lesson study activity will actually give effect to the students' learning outcomes because in this activity always done improvements in the learning process so that the difficulties experienced by the students will be overcome by the running of lesson study activities by the teacher . Garfield in Ibrohim and Syamsuri (2008) also added that the lesson study is a systematic process used by teachers to test the effectiveness of their learning in order to improve their learning outcomes which indirectly also helps in increasing the learning outcomes of their students.

The successful implementation of lesson study in this study can not be separated from the support of colleagues (observer) during the progress of learning in the classroom. They do a detailed observation on the activities of students and not just the activities undertaken by the model lecturer. No matter how small the activities of students can be recorded by colleagues (observer), so the results of observations by the observer can be used as an improvement of the quality of learning of students of Biology Education Studies Program FKIP UNIPA.

D. Conclusion

The conclusions that can be obtained from the implementation of lesson study (LS) are:

1. The implementation of cooperative learning of TSTS type through lesson study (LS) activities can increase cooperation and discussion between the lesson study team

members in the planning and implementation of learning, as well as the reflection on the learning activities.

2. The implementation of TSTS cooperative learning model through lesson study (LS) activities can improve the quality of learning that is seen from the involvement of all students actively during the learning activities.

References

- Azis, A. A., Adnan, Muis, A. ,Taiyeb, A. M. , Faisal. (2013). Penerapan Pembelajaran Kolaboratif Untuk Meningkatkan Aktivitas Belajar Siswa Kelas XI IPA 3 Melalui Lesson Study Berbasis Sekolah di SMA Negeri. *Jurnal Bionature*. Volume 14 (1), Hal. 38-43.
- Dikti. (2008). Buku Panduan Pengembangan Kurikulum Berbasis Kompetensi Pendidikan Tinggi (Sebuah alternative penyusunan kurikulum). Dikti. Jakarta.
- Ibrohim. (2009). *Pengaruh Model Implementasi Lesson Study dalam Kegiatan MGMP terhadap Peningkatan Kompetensi Guru dan Hasil Belajar Biologi Siswa*. Disertasi tidak diterbitkan. Malang: PPs UM.
- Prayitno, T. A., dan Nuril H. (2015). *Penerapan lesson study pada kegiatan praktikum mikrobiologi program studi pendidikan biologi Ikip budi utomo malang*. Jurnal BIOEDUKASI Volume 9, Nomor 1. ISSN: 1693-265X
- Santyasa, I. W. (2009). *Implementasi Lesson Study dalam Pembelajaran*. Disajikan dalam “Seminar Implementasi Lesson Study dalam Pembelajaran bagi Guru-Guru TK, Sekolah Dasar, dan Sekolah Menengah Pertama di Kecamatan Nusa Penida, Tanggal 24 Januari 2009. Universitas Pendidikan Ganesha.
- Slameto, (1995). *Belajaran dan Faktor – faktor yang Mempengaruhinya*, Jakarta: Rineka Cipta.
- Suprijono, A. (2009). *Cooperatif Learning Teori dan Aplikasi PAIKEM*, Yogyakarta: PT. Pustaka Pelajar.
- Susilo, H. (2011). *Pengembangan Potensi Siswa melalui Pembelajaran Sains yang Inovatif: Apa, Mengapa, dan Bagaimana?*. Makalah disajikan dalam Seminar Nasional bertema Inovasi Pembelajaran Sains dalam Pengembangan Sumber Daya Manusia, Universitas Ronggolawe. Tuban, 22 Mei.
- Ueno, M. (2013). *Pembelajaran Kolaboratif dan Pendidikan Demokrasi*. Makalah Disajikan pada Short-Term Training on Lesson Study (STOLS) for Institute of Teacher Training and Education Personnel (ITTEP), Tokyo, 14 Oktober-8 November.
- Yusritawati, (2009). *Pengaruh Penerapan Model Pembelajaran Kooperatif Teknik Two Stay Two Stray terhadap Kemampuan Representasi Matematika Siswa SMP*. (Skripsi Jurusan Pendidikan Matematika FKIP UNPAS: tidak diterbitkan) diunduh dari <http://furahasekai.wordpress.com/2011/09/07/pembelajarankooperatif-tipe-two-stay-two-stray/> tanggal 31 Agustus 2017.