

Adopting Lesson Study on Job Training in Japan to the Program of School Field Introduction in Indonesia

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Abstract

Lesson study is applied as a method to improve the teaching skills of prospective teacher-students when teaching practice in schools. Indonesia uses the term School Field Introduction (PLP) for practical teaching activities in schools, while in Japan the term On Job Training (OTJ) is used. This study examines the differences in lesson study methods that are practiced in universities in Indonesia and Japan, then adapts the lesson study method OTJ in Japan, to apply in the PLP II course at Biology Education, UIN Jakarta. The research method was carried out by direct and indirect observation. Indirect observation is through the YouTube channel of lesson study practices on PLP II at one of the universities in Indonesia. Direct observation and in-depth interviews were conducted with OTJ at the Affiliated Toyama University Junior High School in Japan. The adaptation of the Japanese OTJ was carried out in two stages. The first was carried out in two schools in Jakarta and Depok, involving two teachers and eight students. The second was conducted in one school in Depok, involving one teacher and four students. The results of the study show differences between lesson study have developed in Indonesia and Japan. OTJ in Japan emphasizes collaboration and cooperation among prospective teacher-students in improving teaching skills. Meanwhile, in Indonesia, the emphasis is on collegiality among PLP students, tutor teachers, and supervisor lecturers. Applying the Japanese OTJ to PLP II in Biology Education showed that this method can increase student confidence, improve creativity in teaching methods and media, make worksheets, improve classroom management, and improve teaching skills.

Keywords: lesson study, on job training, school field introduction

Abstrak

Lesson study diterapkan sebagai salah satu metode untuk meningkatkan keterampilan mengajar calon guru-siswa ketika praktik mengajar di sekolah. Indonesia menggunakan istilah Pengenalan Lapangan Sekolah (PLP) untuk kegiatan praktik mengajar di sekolah, sedangkan di Jepang digunakan istilah On Job Training (OTJ). Penelitian ini mengkaji perbedaan metode Lesson Study yang dianut di Perguruan Tinggi di Indonesia dan Jepang, kemudian mengadaptasi metode Lesson Study OTJ di Jepang, untuk diterapkan pada mata kuliah PLP II Pendidikan Biologi UIN Jakarta. Metode penelitian dilakukan dengan observasi langsung dan tidak langsung. Observasi tidak langsung melalui channel YouTube praktik pembelajaran Lesson Study pada PLP II di salah satu perguruan tinggi di Indonesia. Observasi langsung dan wawancara mendalam dilakukan kepada OTJ di SMP Afiliasi Toyama University Jepang. Adaptasi OTJ Jepang dilakukan dalam dua tahap. Tahap pertama dilakukan di dua sekolah di Jakarta dan Depok dengan melibatkan dua guru dan delapan siswa. Tahap kedua dilakukan di salah satu sekolah di Depok yang melibatkan satu guru dan empat siswa. Hasil penelitian menunjukkan adanya perbedaan antara Lesson Study yang berkembang di Indonesia dan Jepang. OTJ di Jepang menekankan pada kolaborasi dan kerjasama antar calon guru-siswa dalam meningkatkan keterampilan mengajar. Sedangkan di Indonesia yang menekankan kolegalitas antara mahasiswa PLP, guru pamong, dan dosen pembimbing. Penerapan OTJ Jepang pada PLP II Pendidikan Biologi menunjukkan bahwa metode ini dapat meningkatkan rasa percaya diri siswa, meningkatkan kreativitas metode dan media pengajaran, membuat LKS, meningkatkan pengelolaan kelas, dan meningkatkan keterampilan mengajar.

Kata Kunci: Lesson Study, Pelatihan Kerja, Pengenalan Lapangan Sekolah

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INTRODUCTION

Lesson study was developed in Japan (Elliott, 2019). This practice has been carried out in Japan since the Meiji Era [1868-1912 years] (Isoda, 2017). This practice is carried out in Japan until now, and has even become a key method of Japanese educational culture to improve the teaching skills of teachers (MEXT, 2017). There are generally three lesson study patterns used in Japan, namely preparation and planning sessions, learning study sessions, and review sessions (Baba, 2017). This simple lesson study pattern has become popular in Japan (Doig & Groves, 2011).

Lesson study focuses on changing motivation through student observation (Coenders & Verhoef, 2019). The changes that occur in students are the effect of positive changes from the teacher (Mutiani et al., 2020). In other words, lesson study is a model that focuses on teacher professional development through investigating their own practice. Lesson study research often focuses on what teachers learn from lesson study (Jansen et al., 2021).

Some studies examine the benefits of lesson study for teachers. Lesson study benefits for improving learning design, because experienced teachers who have more PCK (Pedagogy Content knowledge) can contribute to observations (Coenders & Verhoef, 2019). In addition, teachers have the opportunity to reflect independently, because lesson study provides opportunities for collaborating in preparation, implementation of learning in class, discussion after class, and observing students in other teacher classes. Lesson studies can stimulate teachers to apply cognitive and metacognitive-based learning activities (Vermunt et al., 2019). Lesson study can improve the skills and motivation of teachers because of the collaboration in the lesson study team (Sucilestari & Arizona, 2019; Sugandi, 2019). Review based on observation activity in lesson study helped teachers monitor student activities in more detail (Amintarti et al., 2020). Lesson study improves teaching readiness and student activity (Karimah & Setiyani, 2019).

The practice of lesson study in Indonesia was adopted by Japanese experts working for the IMSTEP (Indonesian Mathematics and Science Teaching Education Project). After being developed, implemented, and disseminated through the JICA technical cooperation program (SISTTEMS and PELITA). Currently, lesson study has spread widely in various regions in Indonesia. In addition, lesson study is disseminated through BERMUTU (Better Education Through Reformed Management and Universal Teacher Upgrading) and the Beginner Teacher Induction Program (PIGP). Lesson study is also used as a strategy to improve the quality of lectures for prospective teachers at universities (LPTK) through LEDIPSTI (Lesson study Dissemination Program for Strengthening Teacher Education in Indonesia) (Ibrohim, 2012). Lesson study is not only applied to teachers, but also to the education of prospective teachers to improve their skills of prospective teachers. The pattern of lesson study applied in Indonesia is generally a three-stage cyclic pattern i.e plan, do, and see (Hendayana, 2016).

Lesson study research on prospective teacher-students in Indonesia showed that lesson study can improve the abilities and skills of prospective teachers in designing, implementing, and evaluating learning (Deswita, 2019). Lesson studies also provide direct experience to prospective teachers especially for implementing the learning tools that have been made. Lesson study was more effective than microteaching (Nugraha, 2021)

Some universities in Indonesia have implemented lesson study in the School Field Introduction Course (PLP) or educational internships (Jauhari, 2011; University of Malang, 2019). However, the implementation of lesson study in PLP is rigid and formal, so the University of Malang (2019) only requires doing lesson study in PLP at least 2 times out of 12 teaching practices in school. Lesson study at universities in Indonesia, which seems rigid and formal, makes lesson study difficult to do in every

practice or during PLP. Lesson study in PLP was not a daily activity in practice teaching and learning in school during PLP, but only introducing what is lesson study and try to feel join in lesson study activity during PLP. So, It is urgent to make more in-depth observations on how lesson study is applied to apprenticeship practices in schools by prospective teachers, especially in the country of origin of lesson study, namely Japan.

This study aims to describe the pattern of Lesson Study applied at a university in Japan on the job training (OJT) as a teacher in school, the difference between School Field Introduction (PLP) Lesson study applied at a university in Indonesia, OJT lesson study from Japan was adopted and implemented to PLP II in Biology Tadris UIN Jakarta, and this study analyzed "how the response from teachers and students who implemented OJT lesson study Japan Style?".

METHODS

The research method used descriptive qualitative (Sugiyono, 2016). The method used in data collection is observation and interviews. The research focused on the implementation of lesson study through OJT in Japan, PLP II in Indonesia, and the adoption of OJT in PLP II at Tadris Biology UIN Jakarta. Table 1 shows the focus, place, and technique of data collection.

Table 1. Focus of research, place, data collection technique

| Focus of research | Place | Data collection technique |
|--|--|---|
| OJT in Japan | Toyama University, Japan | Direct observation on OJT in Fuzuoka Junior High School (Affiliated School Toyama University) Interview: teacher, teacher students, and lecturer |
| PLP II in Indonesia | Malang University, Indonesia | Indirect observation PLP II: UM youtube Channel |
| Adoption OTJ Japan on PLP II in Tadris Biologi | UIN Syarif Hidayatullah Jakarta, Indonesia | Direct observation on PLP II at Senior High School (MA Pembangunan, Affiliated School UIN Jakarta and SMAN 5 Kota Depok) Interview: teacher and teacher students |

The research took place from 2018 to 2020. Details of the time data sources, research subjects, are shown in Table 2.

Table 2. Time, data resource, research subject, and sum of object observation

| Time of research | Data resource | Informan/ research subject | Sum of object |
|----------------------|--|---|-----------------------------------|
| September 11-12 2018 | Direct observation Science learning in Fuzouoka Yunion High School | Prospective teacher-students from Toyama University who did OJT | Three groups, 12 teacher students |
| | interview | Teacher of Fuzouka School | 1 person |

| Time of research | Data resource | Informan/ research subject | Sum of object |
|--------------------|--|--|-----------------------|
| 2020 | Indirect observation | Student teacher of Toyama University | 1 person |
| | | Lecture from Toyama University | 1 person |
| | | University Malang Youtube Channel | 1 video |
| | | Teacher-students from Tadris Biologi UIN Jakarta | Two groups (8 person) |
| Febuari-April 2019 | Direct observation Biology learning in MA Pembangunan and SMAN 5 Depok | Teacher of MA Pembangunan | 1 person |
| | interview | Teacher of SMAN 5 Depok | 1 person |
| Febuari-Maret 2020 | Direct observation Biology learning in SMAN 5 Depok | Teacher-students from Tadris Biologi UIN Jakarta | One group (4 person) |
| | Interview | Teacher Students | 4 person |

RESULTS AND DISCUSSION

The Pattern of Lesson Study in OJT Japan

Negishi Sensei explained that the On Job Training (OJT) at Toyama University was 5 credits which was divided into 1 credit of debriefing and 4 credits in the school field. The debriefing consists of two sessions, namely debriefing at schools and at universities. The debriefing was carried out a month before teacher-students enter the school field. The schedule and materials for 1 credit are shown in Table 3.

Table 3. The Debriefing schedule and material

| Debriefing location | Speaker | Time (minute) | Material |
|---------------------|----------|---------------|--------------------------|
| University | Lecturer | 90 | Student guiding |
| | | 90 | Teacher Profession etics |
| | | 90 | Teaching practice |
| School | Teacher | 90 | Teaching practice |
| | | 90 | Student guiding |
| | | 90 | Moral education* |

**)Moral Education in Japan is a compulsory subject, one hour of learning (50 minutes) per week. There are no special teachers of moral education. Moral education must be taught by all teachers, including teachers of science*

OJT takes time for three weeks at school, but before practice and after practice there are guidances. The OJT schedule by Toyama University can be seen in Table 4.

Table 4. School Field Schedule

| Time | Activity |
|----------------------------|--|
| August | Teaching observation (3 days) |
| August | Pre and post teaching practice guidance |
| August, 29 – September, 19 | Collaborative teaching practice in class, one group consists of 4 teacher students |
| Oktober | Post teaching practice guidance |

There are 70 teacher-students from Toyama University who took OJT at Fuzouka School from many departments. This research focus on science learning observation.

Observing in Science Teaching and Learning Process

Learning was carried out in the laboratory. Students were seated in groups at their respective desks, one group consists of 4 students with a balanced gender proportion, namely two men and two women. There were 9 groups of junior high school students in the laboratory (36 students). There were four teacher students, one person acted as a model teacher and three people acted as supporting teachers who help students technically. The science tutor-teacher was present in the class to observe the OJT process.

The OJT students explain the procedures in the laboratory and guide students to do practical work. The practicals in the science class that we observed were: Class A (teacher-students from group 1) consists of 4 teacher-students. They taught the practicum about predicting substances based on their properties. The teacher-students provide four powders, namely sugar, salt, potato starch, and one powder X [secret]. The four powders are randomly assigned the letters A, B, C, and D. Students predict what powder is in A, B, C, and D based on their properties when given four treatments, namely heated,..... (when the observation was not paid attention to any treatment).

Class B (Prospective teacher-students from group 2) consists of 4 teacher-students. They taught the practicum about observing the characteristics of human organs. The teacher-students brought organs from pigs that were structurally similar to humans. Using the demonstration method, a teacher model showed the organs of the heart and pumped the lungs until they swell. Furthermore, other organs such as the liver, kidney, throat, and heart were given to each group of students for observation.

Class C (Prospective teacher-students from group 3) consists of 3 teacher-students. They taught practicum about observing the reaction of gelatin enzymes in kiwi fruit. Kiwi fruit is separated into three parts: the center, the middle circle, and the outer circle.



Figure 1. Learning and teaching science by teacher-students on the job training

One student acted as a model teacher. Other Prospective teacher-students assist the model teacher in guiding students in group work.

Observing Post Teaching and Learning Process

After the teacher-students implemented their teaching in the classroom, the tutor-teacher gave some reviews of the science teaching activities with the one group (four students). At that time we participated in a review session that lasted from 10.51 – 11.31 (approximately 40 minutes required for this activity). In this review, the tutor-teacher begins by asking about the model teacher's feelings and reflections on his shortcomings while teaching, a model teacher reflects on what things are still not optimal in his teaching. Then asked the same thing from friends who help model teachers and guide students. The tutor-teacher then explained his observations and conveyed some tips, namely "*Don't be nervous when teaching was watched by many people, because in real conditions in Japanese education it will happen all the time*" [*Prospective teacher-students were shocked when we attended in his class*].



Figure 2. The tutor teacher gave reviews the teaching of teacher students

Interviews with Tutor Teacher and Prof. Negishi (Supervising Lecturer from Toyama University)

The question is how do these students prepare lesson plans? The answer is that they prepare their lesson plans in groups. They discussed based on the existing syllabus and create some ideas on how to represent it, what topics to choose, how to teach it, and so on. Then the lesson plan was consulted with the tutor teacher. The tutor teacher gave some ideas on their lesson plan. One lesson plan can be discussed 3-5 times with the tutor teacher.

How did students divide their teaching shifts? The answer is, that a group of four students share roles during teaching. They take turns choosing who will be the model teacher. If one group performs 10 times, then one person will teach 2-3 times.

Based on observations and interviews found "lesson study pattern" in OJT Toyama University with the following stages:

1. Planning

A group of teacher-students (4 people per group) makes a lesson plan together.

2. Implementation

A group of teacher-students chooses one person who will teach in front of the class. Other than the teacher-students become supporting teachers. Other teacher-students help the model teacher in group and individual learning guidance as well as observe student activities during learning. The tutor-teacher observed the teaching and learning carried out by the teacher-students.

3. Review

At the end of the performance, the tutor-teacher gave the review and did a discussion with the teacher-students.

The Pattern of Lesson Study in PLP Indonesia

Teacher-students at UM in PLP II have to practice lesson study at least 2 times as model teachers. In general, the lesson study steps applied in UM are plan, do, and see.

In the planning stage, teacher-students as model teachers, lecturers, tutor-teachers, and other students in the same study program held discussions to develop a lesson plan. They discussed how to choose suitable learning models, learning media, and so on. After the learning plan was agreed upon, the next step is to determine the observers, namely the supervisor, tutor-teacher, and several teacher-students.

In the do stage, implemented the design that has been agreed upon in the discussion at the planning stage. Before teaching, the model teacher conditions students in the class prepare learning materials and media and others, then did teaching according to the plan. The observers see and observe the teaching process. Observations are carried out in a standing position and are focused on student learning activities, not on teaching activities. The observers made notes about student learning activities by the observation format that has been prepared.

In the see stage, the model teacher and the observers reflect on the learning that has been done, using discussion. Before the discussion, the supervisor and Prospective teacher-students agree on who will be the moderator, and note are written, then the discussion is led by a moderator. In the first stage, the moderator opened the discussion, the second stage the moderator asked the model teacher to convey how he felt before, during, and after teaching. The three moderators were asked to re-explain the course of the teaching process. The four moderators asked the model teacher to self-assess the level of success. The five moderators asked the observers to explain their observations in turn. The six moderators asked the model teacher to respond to the observers' explanations. The seventh asked other students to express their opinion. The eight moderators together with the participants formulate valuable activities that can be taken from the lesson study. Finally, the note written presented a summary note of the reflection discussion. The discussion was ended by the moderator.

After the lesson study was finished, the tutor teacher and supervising lecturer conduct clinical supervision of the learning that has been carried out by the model teacher. All Prospective teacher-students recorded comments, input, and criticism from clinical supervision activities to be used as learning materials in the next activity.

Differences in Lesson Study on OJT in Japan and PLP II in Indonesia

Observations of each lesson study stage carried out directly in Japan, and indirectly through YouTube recordings in Indonesia, can be seen in Table 5.

Table 5. Observation lesson study in Japan OJT and Indonesia PLP II

| Step | Japan OJT | Indonesia PLP II |
|----------|---|--|
| Planning | Teacher-students made a lesson plan and worksheet then prepare learning media collaboratively. These learning | Teacher-students, tutor-teacher, and supervisor lecturer discuss and made lesson plan. which |

| Step | Japan OJT | Indonesia PLP II |
|-----------------------|---|--|
| Implementing | tools were discussed with the tutor-teacher on the possibility of the application, and communicated with the supervisor. Teacher-students made a schedule for teaching in front of the class and supporting teachers. The observers only tutor-teacher and supervisor lecture without teacher students. | include the learning model/strategies and media. After that determined who the model teacher and observer. The observers consist of teacher-students, tutor-teacher, and supervisor-lecturer. |
| | Teacher-students as model teacher teach in front of class, other teacher-students as supporting teachers help during group activities and record student learning activities. Teachers and supervisors as observers observe the teaching of model teacher and its impact on students. | There is one model teacher who performs the lesson plans, the other teacher-students become observers along with the tutor teacher and supervisor. They focused to observe the student learning activities, not teacher's teaching. |
| Review and discussing | Discussing with 'multilog' way. The position of teacher-students as learners. Teacher-students did self-reflection as model teachers, supporting teachers give comments, and the tutor teacher give some review based on his observations. The results of the review notes are used by other students in the next turn. | The discussion was led by an agreed moderator. Consists of two activities, namely lesson study activities and clinical supervision. In lesson study activities, teacher-students, tutor teacher, and supervisor are in equal positions. In clinical supervision activities, the student's position is the person being guided. |

The stages of lesson study in OJT and PLP II are the same, namely planning (plan), implementation (do), and review (see). The differences can be seen in Table 6.

Table 6. The differences in lesson study between Japan OJT and Indonesia PLP II

| Steps of Lesson study | OJT Japan | PLP II Indonesia |
|-----------------------|---|---|
| Planing | Planning was done collaborative and cooperative among the propestive teacher-students | Planning was done collegial and cooperative between prospective teacher student and tutor teacher also supervisor lecturer |
| Do | Prospective teacher implemented the lesson plan collaboravely as team teaching. | Prospective teacher implemented the lesson plan like a profesional teacher as a model teacher, and observer in open lesson. |

| Steps of Lesson study | OJT Japan | PLP II Indonesia |
|-----------------------|--|--|
| See (Reflection) | Review session was done naturally. The position of prospective teacher-students as learners not colleagues. Prospective Prospective teacher-students as a team of teaching who get some review from tutor teacher and lecture. | Discussion was done formally, rigid, and collegiality circumstance. Prospective Prospective teacher-students who observed the lesson have the same position with tutor teacher, supervisor lecturer. |
| Conclusion | Lesson study was done within cooperative and collaborative learning circumstance. The view of students is that they are learners who need to be guided by teachers and lecturers. | Lesson study was done within individual and collegial circumstance. Prospective teacher-students are equals with tutors and supervisors. |



Figure 3. Lesson study in Indonesia PLP

Some differences in lesson study OJT in Japan and PLP II in Indonesia (See Figure 1, Figure 2, and Figure 3). In PLP II students were played as model teacher and observers. Teacher-students as observers have an equal position or collegiality with the tutor-teacher and supervisor-lecturer when observing. However, in OJT students act as a model teacher and supporting teachers. Prospective teacher-students are learners or trainees, not collaborating partners with the tutor and supervisor. The position of all students in OJT or PLP II is a participant in school field practice, not a professional who is capable to assess the impact of teaching on student activities in learning.

The second difference is in the lesson study procedure. Lesson Study procedures at PLP II in Indonesia are formal and collaborative in collegiality. This procedure makes Lesson Study difficult to use as a 'daily teaching practice' during PLP II. So The PLP II's obligation is to carry out lesson study at least twice as a model teacher. The OJT in Japan is simple as daily teaching practice, every week students will have their turn as model teachers and supporting teachers. Lesson study PLP II in Indonesia is formal and collegiality is also seen in the stages of the plan, do, and see. Teachers, lecturers, and students are considered co-workers. At the planning stage, students, teachers, and supervisors also make a lesson plan. In the do stage, students who act as observers have the same position as teachers and supervisors. In the see stage, the selected moderator attempts the others students equal with the tutor teacher and supervisor lecturer as if they were co-workers. In contrast to OJT Lesson Study in Japan, teachers and supervisors continue to function as directors who motivate

students to work independently, collaborate, and work together to improve teaching skills from planning to implementing the teaching in the classroom.

Adopting OJT Lesson Study to PLP II in Tadris Biologi UIN Syarif Hidayatullah Jakarta

One school consists of four Biology Education students who teach at the same level. The lesson study step consists of three stages, namely planning, implementation, and review of learning by the tutor and supervising lecturers.

At the planning stage, each group of students at the PLP II school cooperatively makes a lesson plan (RPP), and prepares teaching materials, media, and worksheets. After making the lesson plans and supporting equipment, the student group consulted with the tutor-teacher and supervisor-lecturer. They recorrect the lesson plan (2-3 times) according to the advice of the tutor and supervisor. At this stage, the improvement of making lesson plan skills is carried out collaboratively, cooperatively, and independently. The role of the student as a learner is not a colleague of the lecturer or tutor.

The second stage is implementing the lesson plan cooperatively. Students choose one person to be a model teacher, and the others as supporting teachers. The implementation of teaching in the classroom is carried out collaboratively by students, such as team teaching. Tutor teachers and lecturers as observers, observe teacher students' teaching skills as well as the influence of teaching conducted by model teachers on students' activities in class.

The third stage is review. At this stage, first, the tutor teacher and the supervisor lecturer asked the student group to reflect on their teaching "The difficulties when teaching, do they feel that? Were the lesson plan that they have made been implemented optimally, the obstacles they face, and plans for improving their teaching. Second, the tutor gave some suggestions based on the observation notes, then the supervisor gave some reviews based on the observations. Students recorrect and the lesson plans, teaching materials, learning media, worksheet for use by other students who will perform as model teachers.

The review, which was conducted after the model teacher's first performance, made continuous improvements to other students in the next performance. The results of interviews with students showed that students who perform afterward felt confident in teaching the material because the same material has been taught the before class. This pattern of lesson study based on interviews with teachers has a positive impact on teacher-students and students in the classroom.

The tutor-teacher of SMAN 5 Depok said, "The Lesson study pattern makes teacher-students teach more confidently, learning methods more variety, worksheets and learning media preparation was better. I see the classroom conditions are more conducive because four Prospective teacher-studentstought collaboratively in class."

A similar thing was expressed by the MA Pembangunan teacher, "The teacher-students worked collaboratively, so their lesson plan was better. They taught together, so their teaching skill was the same. Class management when learning is better because they share task who the model teacher focus on teaching, the supporting teacher focus on guiding the students."

The difference between PLP II with and without adopting Japan OJT can be seen in Table 6. Based on Table 6 it can be concluded that the position of Prospective teacher-students in PLP II with and without adopting Japan OJT has similarities in the treatment of teacher students. The Prospective teacher-students are learners not professional teachers. However, PLP II with adopting Japan OJT can improve teaching skills independently, collaboratively, and cooperatively. PLP II without adopting OJT Japan (Conventional) improved teaching skills independently and individualistically.

Table 6. The difference between PLP II with and without adopting Japan OTJ

| | Without adopting Japan OTJ (Conventional) | With adopting Japan OTJ (Lesson Study) |
|----------------------|---|---|
| Practice of teaching | A teacher student teach in one or several classes individually | Four Prospective teacher-students teach in some classes collaboratively |
| Planing | A teacher student made lesson plan individually, consult it with tutor teacher and supervisor lecturer. | Four Prospective teacher-students made lesson plan collaboratively and cooperatively. They consult it with tutor teacher and supervisor lecturer. They discuss and made the schedule who become a model teacher and the superting teachers. |
| Implementing | A teacher student do the lesson plan. The tutor teacher and supervisor lecturer observes and assesses her/his performance. | A model teacher do the lesson plan. The others become supporting teachers who help a model teacher and guide the students. The tutor teacher and supervisor lecturer observe the implementing of lesson plan. |
| Riviewing | Tutor teacher and supervisor lecturer assesses the performance and give criticism. Tutor teacher and supervisor judge the performace of students. | Lecturer asked students as model teacher and supporting teachers to do self-reflection, then tutor teachers and lecturers give some suggestions to improve the method of teaching, learning media or worksheet for the next performance. |
| Characteristics | Individual | Cooperative and collaborative |

Period January-March 2020 PLP II Lesson Study adoption of Japanese OTJ was implemented at SMAN 5 Depok. PLP II lesson study activity is daily teaching practices that do collaboratively and cooperatively. Every practice in the class, there are teacher-students who become a model teacher and the others become supporting teachers that help and guide students in learning. Because it is 'daily teaching practical' in Table 7, it can be seen that each student has the opportunity to perform 14-16 times as a model teacher. These 14-16 performances have fulfilled the requirements to pass in teaching practice activities. The PLP II guidelines state the minimum of practice teaching in the class is 12 times.

Tabel 7. Schedule of PLP II in Biology Subject

| Material | Sub-Material | Timeline | Class of X MIPA | | | | | |
|----------------------|--|---------------|-----------------|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 |
| Excretory system | Excretory organs and structures | 21-22 Januari | F | F | F | S | H | A |
| | Excretory system and process | 21-24 Januari | A | S | H | H | A | S |
| | Disorders of the Human Excretory System, and the Excretory System in Animals | 27-29 Januari | H | H | A | A | F | H |
| | Urine Content Test Practicum | 28-31 Januari | S | A | S | F | S | F |
| | Nervous system | 3-5 Februari | F | F | F | S | H | A |
| Coordi-nation System | Sense System | 4-7 Februari | A | S | H | H | A | S |
| | Hormone System | 11-12 Febuari | H | H | A | A | F | H |
| | Practical Blind Spot Test and Taste Mapping on the Tongue | 11-14 Febuari | S | A | S | F | S | F |
| NAPZA | Types of Drugs | 17-19 Febuari | H | H | A | A | F | A |
| Review for mid test | | 18-21 Febuari | S | A | S | F | S | F |

Note: F, A, S, H the name of teacher-students who have taken PLP II in SMAN 5 Depok

The views of Prospective teacher-students as users of the PLP II lesson study model OJT Japan for the implementation at SMAN 5 Depok in 2020 are as follows: 1) PLP II with lesson study is very helpful in making lesson plans, learning activities using group methods, and helping class conditioning in completing teaching needs such as projectors, laptops, and others; 2) Learning with a group discussion or practicum methods will be more helpful by using lesson study patterns because students have more opportunities to ask model teachers or support teachers; 3) PLP II with Lesson Study help Prospective teacher-students who are practicing teaching in class. While teaching in class, a collaborator friend always reminds them if there are errors or deficiencies so that they can be quickly corrected and rechecked at the next meeting; and 4) PLP II with lesson Study takes more time. Sometimes they take break time to discuss before teaching. They need more time to discuss planning, preparation, and reflection, as well as frequent debates.

CONCLUSION

Japan OJT conducts a lesson study model that focuses on student collaboration, which is emphasized to improve teaching skills as learners. In contrast to the PLP II Lesson Study in Indonesia, students are considered equal to professionals, so Lesson Study seems formal, rigid, and unnatural. The application of the Japanese adaptation of OJT in Tadris Biology shows that lesson study is carried

out naturally as a daily teaching practice. The practice of adoption lesson study Japan OJT is suitable to apply for teacher education students (S1, Level 6) which emphasizes improving teaching skills as a learner, not a professional teacher.

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