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**ANALYSIS OF BENEFITS OF JOINT FIELD LECTURE BETWEEN
BIOLOGY IAIN KERINCI AND MASTER OF BIOLOGY EDUCATION ON
ECOLOGY AND ENVIRONMENT SUBJECT**

**ANALISIS MANFAAT KULIAH LAPANGAN BERSAMA ANTARA BIOLOGI
IAIN KERINCI DAN MAGISTER PENDIDIKAN BIOLOGI PADA MATA
KULIAH EKOLOGI DAN LINGKUNGAN**

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Abstract

The field lecture is important learning experience for students which is carried out in the open to apply the theory they have learned. This is necessary for the Ecology and Environment subject so that it can provide real experience for students. This study aimed to determine the benefits of joint field lecture between Biology Tadris Study Program at IAIN Kerinci and the Masters in Biology Education at Padang State University for Ecology and Environment subject. The research method was descriptive qualitative-quantitative (mixed method). The research subjects were selected Biology Tadris students along with IAIN Kerinci lecturers and students of the Masters of Biology Education, Padang State University. Data collection was carried out with tools in the form of the questionnaire and the interview list. After the data were collected qualitatively, the data were analyzed based on each indicator of questionnaire and interview, so that the total results of all indicators were obtained. For the data from questionnaire were quantified in percentage. The study results indicated that joint field lecture provided the benefits for students who participated in field lecture activities. The results of questionnaire and interview showed the benefits for students in increasing knowledge, insight, motivation, and experience. In the implementation of the field lecture, students were very good at collaborating, both within groups and among groups.

Keywords: field lecture, ecology and environment, learning

Abstrak

Kuliah lapangan merupakan pengalaman belajar penting bagi mahasiswa yang dilakukan di tempat terbuka untuk mengaplikasikan teori yang telah dipelajari. Hal ini diperlukan untuk mata kuliah Ekologi dan Lingkungan sehingga dapat memberikan pengalaman nyata pada mahasiswa. Penelitian ini bertujuan untuk mengetahui manfaat kuliah lapangan bersama antara Program Studi Tadris Biologi IAIN Kerinci dan Magister Pendidikan Biologi Universitas Negeri Padang pada mata kuliah Ekologi dan Lingkungan. Metode penelitian ini adalah deskriptif kualitatif-kuantitatif (mixed method). Subjek penelitian adalah mahasiswa Tadris Biologi yang terpilih beserta dosen IAIN Kerinci dan mahasiswa Magister Pendidikan Biologi Universitas Negeri Padang. Pengumpulan data melalui kuesioner dan wawancara. Setelah data terkumpul secara kualitatif, data dianalisis berdasarkan masing-masing indikator kuesioner dan wawancara, sehingga diperoleh hasil total dari semua indikator. Untuk data dari kuesioner dikuantifikasi dalam persentase. Hasil penelitian menunjukkan bahwa kuliah lapangan bersama memberikan manfaat bagi mahasiswa yang ikut melakukan kegiatan kuliah lapangan. Hasil kuesioner mahasiswa dan wawancara mahasiswa dan dosen menunjukkan manfaat bagi mahasiswa dalam meningkatkan pengetahuan, wawasan, motivasi, dan pengalaman. Dalam pelaksanaan kuliah lapangan, mahasiswa sangat baik dalam bekerjasama, baik di dalam kelompok maupun antar kelompok.

Kata kunci: kuliah lapangan, ekologi dan lingkungan, pembelajaran

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Introduction

Field lecture (or also known as fieldwork or field trip or field study) is a way of teaching by inviting students to the nature or the certain objects outside the lecture room to investigate something related to lecture material (Spicer & Stratford, 2001). Field lecture is conducted by lecturers and students in certain subjects with the aim of providing opportunities for students to gain knowledge, usually field lecture is carried out outdoors (Patrick, 2010). According to Peter H. Openshow & Stempfen J. Whitle (1993) in Ariyansyah (2018) stated that field lectures are carried out outside the classroom or laboratory that have a wide distance to be used.

Field lecture provides an important learning experience for students, especially prospective biology teachers. The conducted field lecture will provide opportunities for students to explore the object of study in a complete and authentic way. Field lecture can provide many opportunities for students to gain a lot of knowledge. Hudak (2003) stated that fieldwork can develop a relationship between theories or concepts that students gain in class and the experiences students gain through fieldwork.

In addition, field lecture can also improve and develop students' knowledge. Furthermore, Vassala (2006) revealed that fieldwork allows students to participate in the lecture process so that it helps them to gain new knowledge, experience, and skills. Field lectures can also hone the ability to make observations and perceptions by using various senses that students have (Nabors, Edwards, & Murray, 2009). Behrendt & Franklin (2014) stated that fieldwork can develop students' communication skills.

Field lecture is generally conducted outside the campus environment to be able to provide real experience to students. In field lecture activities, the steps that must be followed are instructions from the lecturer that refer to how scientific activities should be carried out when entering the field, or the initial provisions delivered by the lecturer during lectures. Directorate of Education Personnel, Directorate General of Quality Improvement of Educators and Educational

Personnel, Ministry of National Education (2008) in Ibrahim, Surtikanti, & Riandi (2018) stated that there are six stages of scientific research as follows: 1) conducting the observations, 2) forming the hypotheses, 3) creating the research designs, 4) proving the truth of research designs, 5) conducting the research, and 6) forming the theory.

In this field lecture, the subject is Ecology and Environment. Ecology is a branch of science that studies the relationship of living things to their environment, while Environment is a system in life. So Ecology and Environment is a subject study that discusses organisms or living things in an ecosystem or environment (Praja & Prastiwi, 2022). In Ecology and Environment subject, the field lecture is usually conducted in an open place to apply the theory that has been learned.

The open place is like an open nature, is used in field lecture to fulfill educational purposes where students can observe and study objects directly and understand its benefits (Ritonga, Atnur, Panjaitan, Rahmat, & Syafriyati, 2022). The purposes of field trips are 1) to provide the hands-on experience, 2) to stimulate the interest and motivation in science, 3) to add the relevant learning, 4) to strengthen the observation and perception skills, and 5) to encourage the community personal development (Easton & Gilburn, 2012). Many studies showed that field lectures still limited to visit certain objects and enriching, so that the learning objectives to be achieved through these activities were very limited, whereas with the field lecture many things can be obtained by students if the activities in field lecture are carried out and managed effectively (Amprasto, Rustaman, Surtikanti, & Saefudin, 2012).

Field lecture activities will be maximally carried out if students know the benefits and smooth implementation of field lectures. The research on the benefits and procedures for conducting field lectures in the field of Ecology and Environment will be very useful in adding insight and information for students before conducting field studies. This study aimed to determine the benefits of a joint field study between

Biology Tadris Study Program at IAIN Kerinci and the Biology Education Masters Study Program at Padang State University in Ecology and Environment subject. The reasons for conducting the joint field lecture were to increase students' understanding while in the field, then to establish the friendship between the two campuses and also to increase students' enthusiasm when carrying out field lectures because they met new people in the field.

Method

This research method was descriptive qualitative and quantitative (mixed method). This research was sometimes referred to as naturalistic research because it was carried out under direct conditions, so its purpose was to identify and describe certain phenomena that occur in general (Bungin, 2007; Moleong, 2017). The research subjects were taken using purposive sampling that they could answer the research objectives by providing a more representative value. The research subjects were the selected students of Biology Tadris Study Program at IAIN Kerinci and the students of Biology Masters Education at Padang State University (Universitas Negeri Padang). Besides students, as many as 10 lecturers of Biology Tadris Study Program at IAIN Kerinci who were involved in field lecture were also the subject of research, to confirm whether the field lecture carried out was beneficial or not. The location and time of the research was carried out in Hiang Betung Kuning, Sitinjau Laut Subdistrict, Jambi Province on January 3, 2022. During field lecture, the students took measurements of temperature, pH and water oxygen.

Data collection was carried out with tools in the form of the questionnaire and the interview list. The questionnaires were given and answered by students of IAIN Kerinci and students of Biology Education Masters, while the interview list were answered by students and lecturers in order to know the benefits of the joint field lecture. After the data were collected qualitatively, the data were analyzed based on each indicator of questionnaire and interview, so that the total

results of all indicators were obtained. For the data from questionnaire were quantified in percentage.

Results and Discussion

To find out how many the benefits of field lecture for students, a questionnaire was given to students with the results which can be seen in Figure 1.

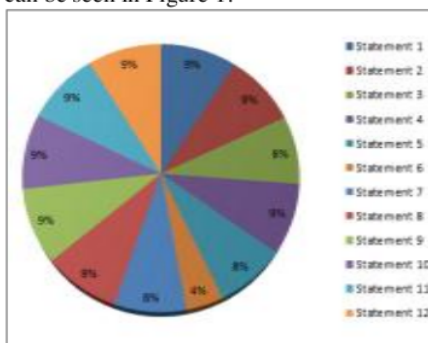


Figure 1. The questionnaire results of benefits of field lecture for students

In the questionnaire given to students about the benefits of field studies, there were 12 statements that were asked to students such as the need for preparation before carrying out the field lectures, the presence or absence of guide books, the materials and benefits obtained after carrying out the field lectures. There were 8 statements that obtained 9%, then 3 statements obtained 8% and 1 statement with 4%. The field lecture was the mandatory intracurricular program that must be followed by students.

The purpose of field lecture was for students to be able to apply practical methods that have been obtained during practical lecture into actual natural situation so that they are able to analyze phenomena that occur in ecological objects/locations. When field lecture, students were directed to measure the temperature, pH and oxygen of the water so that they knew the conditions of their environment. The implementation of field lectures was very beneficial for students, because field lectures could increase students' knowledge, experience and insight. This was in line with Alasela, Olufunmilola, & Atobatele's research (2015), which stated that field lecture would

produce an effective and efficient learning, and the advantage of field lectures was that students can directly experience the material or objects in the field.

In addition, judging from the results of interview, students stated that the field lecture was very beneficial. In the interview questions given to students about the benefits of field lecture, there were 10 questions, such as whether the tools and media used were adequate, whether there any obstacles in the implementation and motivation in participating in the field lecture. By attending the field lecture, students gained experience in conducting the field research.

Students need a field study experience together because when they become teachers, they will be able to directly teach Biology subjects related to ecosystems and environment to students in nature directly. The field lecture held jointly between Biology Tadris Study Program of IAIN Kerinci and the Biology Education Masters Study Program of Padang State University reduces the possibilities that can occur, including the lack of student understanding of what is being done in the field, lack of friendship between two campuses, and lack of students' enthusiasm because of no meeting the new people in the field.

From the results of interviews conducted, it can be concluded that the implementation of field lecture is very beneficial for students, both in terms of increasing student learning motivation, increasing student learning experiences, increasing knowledge and insight into ecological and environmental materials for students. This is in line with research of Ibrahim, Riandi, & Surtikanti (2017), which stated that students gave the positive response to integrated field courses, because students assessed the integrated field course program could increase the meaning of the learning process and the effectiveness of implementation in integrated field courses.

Then the interview with lecturers, there were 10 questions about the benefits of field lecture, such as whether there any preparations and steps taken before conducting the field lecture and whether

there were benefits and problems that occurred in field lecture. The results of interview with lecturers showed that the field lecture was very beneficial. The facilities and infrastructure needed during the implementation of field lecture as a whole were sufficient for the smooth implementation of field lecture. The exercise tools and materials were available for each group. Likewise, the field lecture guidebooks were available for each individual so as to facilitate the field lecture process.

The infrastructure used has an impact on the development of the ability to master lecture material and being more active in studying Biology material. From the results of interviews conducted with students and lecturers, it could be concluded that the implementation of joint field lecture was very beneficial for students. The joint field lecture could provide many opportunities for students to gain a lot of knowledge. During the implementation of joint field lecture, students were very good at collaborating, both in groups and among groups, all work according to their respective duties.

Students also worked with discipline when collecting data in the field. Even though they were serious in doing their assignments, they looked happy and didn't look tired or sound complaining. This was in line with Hudak's (2003) research which stated that fieldwork could develop a relationship between theories or concepts acquired by students in class and experiences gained by students through fieldwork. As for Abidin (2017) stated that during the implementation of field lecture, students were very good at working together, both within groups and among groups.

Conclusion

The joint field lecture between Biology Tadris Study Program at IAIN Kerinci and Biology Masters Education at Padang State University (Universitas Negeri Padang) for Ecology and Environment subject provided benefits for students who take part in field lecture activities. This can be seen from the results of students'

questionnaire that field lecture could increase students' knowledge, experience and insight. This was also supported by the results of student interviews that field lecture was very beneficial for students, both in terms of increasing student motivation, increasing student experience, adding knowledge, and insight for students. Meanwhile, the results of interviews with Biology Tadris Study Program lecturers of IAIN Kerinci showed that the implementation of field lectures was beneficial for students. During the implementation of the field lecture, students were very good at collaborating, both within groups and among groups.

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