



The Similarity of Perceptions on Semester Learning Plan for General Course Environmental Study Based on Disaster Mitigation

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ABSTRACT

Purpose of the study: This study aims to analyze the disaster mitigation-based semester learning plan for the general course of living environment studies at Tadulako University.

Methodology: This is a descriptive qualitative study employing purposive sampling and survey methods using questionnaires. Data were analyzed through data reduction, data presentation, and conclusion drawing. Thirty respondents participated in the study.

Main Findings: Findings reveal that semester learning plan development indicators require seminars and workshops with experts, faculty, students, and alumni. The semester learning plan integrates disaster mitigation-oriented learning outcomes using case methods and team-based projects supported by field practice. semester learning plan implementation aligns with lecturers' improvisation, and periodic reviews are recommended every three years.

Novelty/Originality of this study: The study provides a framework for integrating disaster mitigation into the semester learning plan for general course of living environment studies, highlighting practical approaches like case methods and field projects. It advances the integration of disaster education into university-level environmental curricula.

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1. INTRODUCTION

Indonesia's geographical location, which is located at the confluence of three active plates, namely Indo-Australia, Eurasia, and the Pacific, results in the condition of Indonesia having a high level of vulnerability to geological and hydroclimatic disasters [1], [2] Based on data from the National Disaster Management Agency (BNPB) in 2018, disaster events that occurred in Indonesia experienced 3,397 incidents, with 3,874 fatalities dying and missing. In the last ten years from 2009-2018, the impact of disasters varied widely, ranging from damage, losses, to causing casualties.

Law Number 32 of Year describes that the environment is a collection of space with all objects, forces, circumstances, and living things, including humans, animals and plants and all their behaviors, which affect nature itself, survival, and the welfare of other living things [3]-[5]. In addition to affecting the survival of life, the environment also affects the welfare of living things. This is because without the environment, living beings, especially humans, will not be able to live normally because the environment is a very important factor in life for growth, character and also for health [6], [7]. If the environment we live in is very dirty, many problems will arise from starting to get sick and die, it is because the environment around them is not suitable to live in or the

environment is inadequate [8], [9]. Regarding the relationship between humans and the natural environment, several understandings have developed that have become the characteristics of scientific views at a certain time [10], [11].

Environmental Studies is one of the general courses at Tadulako University. One of the first steps for educators to introduce the environment to students is so that students can develop awareness of the need for individuals to meet the needs of their environment [12]-[14]. In the learning process, a learning planning document is needed in the form of semester learning plan [15], [16]. The semester learning plan is a series of learning planning documents that are prepared as a guide for students in carrying out lecture activities for one semester to achieve the learning outcomes that have been set [17], [18]. Semester learning plan is a learning plan made by the Lecturer before carrying out lectures [19]. The semester learning plan contains elements of Learning Outcomes, Learning Objectives, Learning outcomes achievement indicators, Assessment Criteria and Forms, Learning Materials, Learning Methods, Learning Evaluation and Learning Resources as well as assessment weights [20], [21]. However, the difference in the perception of the Semester Learning Plan makes the learning objectives not achieved properly. So that students' understanding of Environmental Science courses is different and incomplete.

A series of natural disasters in Indonesia, especially in recent years, have developed awareness about the vulnerability and vulnerability of the community. The reactive attitude to the disaster management pattern carried out is again felt to be inadequate [22], [23]. Tadulako University is a campus located in the area of natural disasters in the form of earthquakes and tsunami. So it is important that in the semester learning plan, especially the semester learning plan Environmental Science is paired with material related to disaster mitigation that is studied in the semester learning plan. Mitigation is defined as efforts and activities carried out to reduce and minimize the consequences caused by disasters which include preparedness and vigilance [24]-[26]. Natural disasters are natural phenomena that no human being is able to predict when they will occur, even though humans with all their knowledge try to read these natural phenomena [27]-[29].

Materials related to disaster mitigation are very important so that students understand what efforts are being made to reduce the risks and impacts caused by disasters on communities in disaster-prone areas, be it natural disasters, man-made disasters or a combination of both in a country or society. Meanwhile, according to article 1 paragraph 6 of Government Regulation No. 21 of 2008 *in* Regional Disaster Management Agency (BPBD) Karanganyar concerning the Implementation of Disaster Management, disaster mitigation is a series of efforts to reduce disaster risk, both through physical development and awareness and improving the ability to deal with disaster threats [30]. Disaster mitigation is actually related to the disaster management cycle in the form of handling efforts before a disaster occurs [31].

Although the Semester Learning Plan is an important document in learning planning, studies on the integration of disaster mitigation materials in the Semester Learning Plan, especially in general courses such as Environmental Studies, are still very limited. Most previous studies have focused more on the development of the Semester Learning Plan in general without highlighting the importance of combining disaster mitigation aspects that are relevant to the geographical conditions of the area. In addition, the lack of a uniform perception among educators in understanding and implementing the Semester Learning Plan results in learning objectives not being achieved optimally, especially in the context of courses that are oriented towards environmental awareness and disaster risk. Therefore, research is needed that specifically analyzes how the integration of disaster mitigation materials can improve the effectiveness of the Semester Learning Plan for the Environmental Studies course.

The novelty of this study lies in the study of the Semester Learning Plan designed based on disaster mitigation, which is in accordance with local needs and relevant to the geographical conditions of Tadulako University which is prone to natural disasters such as earthquakes and tsunamis. This study offers an important contribution in supporting the development of a curriculum that is not only oriented towards academic achievement, but also on strengthening disaster mitigation competencies among students.

The urgency of this research lies in the urgent need to increase disaster awareness and preparedness among students, considering the high risk of disasters in the Tadulako University area. As future leaders and community movers, students need to understand the importance of disaster mitigation as an integral part of learning, especially in courses that are closely related to the environment. The Semester Learning Plan based on disaster mitigation is not only relevant to the local context but also supports the national and global agenda in building a disaster-resilient society. The specific purpose of this study is reviewing the semester learning plan based on disaster mitigation for the general course of living environment studies within the existing Tadulako University Scope.

2. RESEARCH METHOD

This research was carried out in April – November 2021 at Tadulako University Jl. Soekarno Hatta No. KM. 9, Tondo, Mantikulore, Palu City, Central Sulawesi 94148. This type of research is a qualitative research

designed as a *qualitative descriptive research*. Where the results of this study try to explain in detail the situation in the field. In qualitative research, theories and data sources can develop in the field [32], [33]. The subject of this study is a lecturer teaching the Constitutional Court of the Ministry of Environment and Environment within Tadulako University. The researcher used a purposive sampling technique. The procedures in the research carried out are divided into two stages as follows: Preparation Stage, namely preparing the necessary administrative requirements during activities in the field, compiling a research questionnaire to be disseminated, coordinating with the Tadulako University basic laboratory as part of the general course of living environment studies related to the implementation of the research to be carried out, making initial observations by visiting Basic Laboratory Technical Implementation Unit (LABDAS) and requesting several research supporting documents and interview the chairman of Basic Laboratory Technical Implementation Unit (LABDAS). Implementation stage (determining 30 research subjects with certain conditions then contacting the subjects, distributing research questionnaires and collecting data and analyzing data). Data analysis in this study uses three streams of activities that occur simultaneously, namely: Data reduction, Data presentation, and Drawing conclusions and verifying data [34]-[36].

3. RESULTS AND DISCUSSION

3.1 Research Results

Preparation of Semester Learning Plan.

The semester learning plan preparation indicator consists of 5 statements, the results of the calculation can be seen in Table 1.

Table 1. Perception of Semester Learning Plan Preparation Indicators

Statement	1	2	3	4	5	Average	Conclusion
The semester learning plan for the general course of living environment studies is prepared by a competent team at each faculty in the Tadulako University environment.	1	3	2	7	17	4.17	Good
The semester learning plan for the general course of living environment studies prepared by a competent team from Tadulako University and will be enforced in all Faculties.	2	1	4	7	16	3.97	Good
Semester learning plan for the general course of living environment studies need to be held in seminars involving environmental experts, lecturers, students and alumni.	1	1	0	9	19	4.57	Excellent
The semester learning plan for the general course of living environment studies was socialized to all lecturers of the general course of living environment studies in the Tadulako University environment.	1	1	4	1	23	4.30	Excellent
Each Study Program within Tadulako University develops its own semester learning plan for the general course of living environment studies as needed.	0	1	6	10	13	3.87	Good
Average						4.17	Good

Content of the Semester Learning Plan

The indicator for the preparation of the semester learning plan consists of 7 statements, the results of the calculation can be seen in Table 2.

Table 2. Perception of Semester Learning Plan Content Indicators

Statement	1	2	3	4	5	Average	Conclusion
Attitudes expected from the graduate competency standards in the semester learning plan for the general course of living environment studies include: working together and having social sensitivity and concern for the community and the environment.	0	1	0	5	24	4.83	Excellent
The knowledge expected from the graduate competency standards in the semester learning plan for the general course of living environment studies includes: mastering the concepts and theories studied in this course.	0	1	0	10	19	4.67	Excellent
Skills expected from graduate competency standards in semester learning plan for the general course of living environment studies include: having the ability to make the right decisions in the context of solving environmental problems.	0	1	1	4	24	4.73	Excellent

The living environment studies course examines environmental material as the Main Scientific Pattern (PIP) of Tadulako University	0	1	2	4	23	4.60	Excellent
The living environment studies course examines disaster and disaster mitigation materials considering that Central Sulawesi is a disaster-prone area.	2	0	1	7	20	4.47	Excellent
The learning methods applied to living environment studies courses include the Case Method and Team Base Project.	1	1	1	7	20	4.50	Excellent
Living environment studies courses need to be supported by field practice activities	0	1	0	6	23	4.80	Excellent
Average						4.66	Excellent

Semester Learning Plan Implementation

The indicator for the preparation of the semester learning plan consists of 2 statements, the results of the calculation can be seen in Table 3.

Table 3. Perception of Semester Learning Plan Implementation Indicators

No	Statement	1	2	3	4	5	Average	Conclusion
1	Semester learning plan for the general course of living environment studies are used as a benchmark by each lecturer in the learning process	1	1	0	4	24	4.73	Excellent
2	Lecturers are allowed to improvise in the implementation of semester learning plan as long as it does not go out of the predetermined graduate competency standards.	0	0	2	6	22	4.63	Excellent
	Average						4.68	Excellent

Semester Learning Plan Evaluation

The indicator for the preparation of the semester learning plan consists of 3 statements, the results of the calculation can be seen in Table 4.

Table 4. Perception of Semester Learning Plan Evaluation Indicators

Statement	1	2	3	4	5	Average	Conclusion
Semester learning plan for the general course of living environment studies are reviewed every 3 years	1	2	5	11	11	3.73	Good
The review of the Semester learning plan for the general course of living environment studies subject is carried out through a Workshop	2	2	2	9	15	4.07	Good
The review of the Semester learning plan for the general course of living environment studies was carried out through a Workshop	2	1	0	5	22	4.57	Excellent
Average						4.12	Good

3.2 Discussion

The questionnaire data that has been distributed to 30 research subjects are effective lecturers of living environment studies courses spread across several faculties at Tadulako University. The things asked in the questionnaire were about Perception based on semester learning plan Preparation Indicators, Perception based on semester learning plan Content Indicators, Perception based on semester learning plan Implementation Indicators and Perception based on semester learning plan Evaluation Indicators. The category related to the preparation of the semester learning plan, in the questionnaire containing several questions, was obtained from the results of 30 subjects who were researched answered with an overall average score of 3.87 with a good category. Input on the content of the semester learning plan, there were several things that were questioned and obtained an overall average result of 4.66 with a good category. The semester learning plan implementation indicator had results from 30 subjects who were studied answered with an overall average score of 4.68 with the category of very good. The semester learning plan evaluation indicator had the results of 30 subjects who were studied answering with an overall average score of 4.12 with a good category.

Based on the research results, the average perception of lecturers towards the indicators in the Semester Learning Plan for the Environmental Studies course showed a good to very good category. The Semester Learning Plan preparation indicator received an average score of 3.87 (good), indicating that although the preparation had been done well, there was still room for improvement, especially in involving more expert lecturers to ensure compliance with academic guidelines. The Semester Learning Plan content indicator recorded

the highest average score of 4.66 (very good), reflecting that lecturers considered the contents of the Semester Learning Plan to be relevant and support the learning outcomes of graduates, although adjustments were needed to be more contextual with aspects of disaster mitigation. The implementation of the Semester Learning Plan was also considered very good with an average of 4.68, but improvisation by lecturers during implementation was still needed to adjust to real conditions in the classroom. Meanwhile, the evaluation indicator received an average score of 4.12 (good), indicating the need for improvement in the Semester Learning Plan evaluation mechanism, for example through periodic workshops every three years as suggested by lecturers.

These findings indicate that although the Environmental Studies Semester Learning Plan is quite effective in supporting learning, there is still a need for strengthening in several aspects such as collaborative involvement in preparation, relevance of content to disaster mitigation, and a more structured evaluation system. The use of methods such as the Case Method and Team-Based Project supported by field practice is also one way to achieve graduate competency standards more effectively.

The academic guidelines of Tadulako University article 27 concerning lectures where point 3 explains that the learning material of each course as referred to in paragraph (2) is described in the Semester Learning Plan, which is determined and developed by lecturers independently or jointly in a group of expertise in a field of science and/or technology in the study program [37]. Until now, the preparation of the semester learning plan living environment studies is still not optimal, involving a group of lecturers in the field of expertise and following academic guidelines, so that the research subjects really expect that the indicators of the preparation of the semester learning plan can be carried out properly and optimally. In addition, the compiler of the semester learning plan in article 27 also explained the content of the semester learning plan.

The content of the semester learning plan that contains the academic guidelines of Tadulako University, namely the semester learning plan contains at least one load; a) name of study program, name and course code, semester, credits, name of the effective lecturer; b) Graduate competency standards charged to courses; c) planned final capability; d) study materials related to the ability to be achieved; e) learning methods; f) the time provided to achieve the ability in each lesson; g) Student learning experience embodied in the description of tasks that must be done by students during 1 semester; h) criteria, indicators, and assessment weights; i) List of references used. In the content of the semester learning plan above, there are graduate competency standards that are charged to the course. This is very important to note because according to the lecturer's perception of the content of the semester learning plan is very good.

Semester learning plan for living environment studies courses should contain graduate competency standards related to attitudes, knowledge and skills that refer to the study of University Main Scientific Pattern (PIP), disaster and disaster mitigation. To achieve graduate competency standards, appropriate learning methods are needed, including *Case Method* and *Team Base Project* which are supported by field practice activities. Indicators of semester learning plan implementation This means that in addition to the semester learning plan that has been made as a benchmark by course lecturers, it is also expected that lecturers improvise in the implementation of semester learning plan as long as it does not go out of the graduate competency standards that have been determined. is the semester learning plan of the living environment studies course that has been socialized immediately used as a benchmark in learning, although it does not rule out the possibility of lecturers improving. Perception based on the semester learning plan Evaluation Indicator obtained the result that the lecturer's perception of the evaluation indicator was good. The review of the semester learning plan of the living environment studies course should be carried out every 3 years by being reviewed by the University Team through a workshop.

Higher education as an educational institution that functions to produce quality human resources, is required to be able to produce intelligent and competitive graduates according to the needs of the job market [38]-[40]. Related to the importance of universities to improve the quality of their inputs, processes, outputs, and outcomes, the university quality assurance system is very important. In Government Regulation No. 19 of 2005 concerning National Education Standards, namely article 91, it is stated that every educational unit in the formal and non-formal pathways is obliged to carry out quality assurance of education. One way to carry out quality assurance with semester learning plan living environment studies which is to prepare the right semester learning plan living environment studies, improve the content of semester learning plan living environment studies, implement the right semester learning plan living environment studies not out of graduate competency standards and proper evaluation. If these four indicators can be implemented, the semester learning plan living environment studies can be a good guideline for its users. With good use, it will produce quality graduates.

The results of this study have significant implications for curriculum development and learning in higher education, especially at Tadulako University. First, the integration of disaster mitigation into the contents of the Semester Learning Plan can increase the relevance of learning materials to geographical conditions and the needs of local communities. This supports the development of students who not only have academic knowledge but also practical skills to face future disaster challenges. Second, regular evaluation of the Semester Learning Plan allows lecturers and the university to ensure that the contents, methods, and implementation of the Semester Learning Plan remain relevant to student needs and scientific developments. Third, the application of

innovative learning methods such as the Case Method and Team-Based Project that support students' applicative understanding will also improve the overall quality of graduates.

Based on the results of the study, it is recommended that Tadulako University strengthen collaboration in the preparation of the Semester Learning Plan by involving a multidisciplinary team that includes expert lecturers, disaster practitioners, and other stakeholders to ensure relevance and comprehensiveness. Disaster mitigation materials need to be integrated as one of the core competencies in the Environmental Studies Semester Learning Plan to improve students' readiness to face local challenges. Periodic evaluation of Semester Learning Plans, for example through workshops every three years, is important to ensure the suitability of content, methods, and implementation with the development of science and community needs. In addition, the application of innovative learning methods such as the Case Method and Team-Based Project need to be continuously encouraged to support the development of students' critical thinking and problem-solving skills. Policy and infrastructure support are also needed to strengthen the implementation of Semester Learning Plans that are effective, relevant, and contextual to local and global needs.

4. CONCLUSION

Lecturers' perception of the indicators for the preparation of semester learning plan for living environment studies courses needs to be discussed in workshops involving environmental experts, lecturers, students and alumni. Furthermore, semester learning plan was socialized to lecturers in charge of living environment studies courses. The lecturer's perception of the semester learning plan content indicators is very good. Semester learning plan for living environment studies courses should contain graduate competency standards related to attitudes, knowledge and skills that refer to the study of University Main Scientific Pattern (PIP), disaster and disaster mitigation. To achieve graduate competency standards, appropriate learning methods are needed, including Case Method and Team Base Project which are supported by field practice activities. Lecturers' perception of semester learning plan implementation indicators shows that the semester learning plan of living environment studies courses that have been socialized are immediately used as a benchmark in learning, although it does not rule out the possibility of lecturers improving. Lecturers' perception of the semester learning plan Evaluation indicator shows that the lecturer's perception of the evaluation indicator is good. The review of the semester learning plan of the living environment studies course should be carried out every 3 years through a workshop.

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