
The Reconstruction of Environmental Education Curriculum Based on Kkni through the Integration of Character Value of Environmental Care and Disaster Response

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Abstract. The objective of this research was to reconstruct the Environmental Education curriculum based on Indonesian National Qualification Framework (KKNI) through the integration of the character value of environmental care and disaster response. The samples of research were 10 Lecturers who have taught Environmental Education Courses. The types of data used in this research were qualitative and quantitative data. The data were obtained from primary and secondary data. The primary data was obtained from the documentation of the use of learning devices. Meanwhile, the secondary data was obtained from the research instruments in the form of open and closed questionnaires. The open questionnaire was used as an interview guideline. The data were analyzed descriptively. For the Closed-Questionnaire (Verification of the implementation of the Environmental Education course), the percentage of Environmental Education learning materials that had been implemented was at 90%, while the learning material that had not been implemented was at 10%. For the Open-Questionnaire (Interview of the implementation of Environmental Education courses), most lecturers said that the reconstruction or revision of the course was needed in terms of Instructional Plans, assessment sheets, observation sheets, Power Points, and Student Worksheets. This reconstruction was carried out to achieve the goal of the course and to support the policies of University of Riau as Centre of Excellence (CoE) in the management of wetlands and disaster.

Keyword: *Curriculum, Environmental Care, Reconstruction, Disaster Response.*

1. Introduction

The Teacher Training Institute (LPTK) is a LPTK is a higher education institution which organizes undergraduate, graduate, and professional programs that are primarily directed at mastering educational disciplines educational disciplines in accordance with KKNI at levels 6 and 7. An undergraduate program is organized to provide the Pre-Service Teachers who are able to apply logical, critical, systematic and innovative thinking in the context of the development or implementation of science and technology that applies and takes into account the values of humanities that are suitable with the field of their expertise.

The strengthening of character is very needed in order to realize a cultured nation through strengthening of religious values, honesty, tolerance, discipline, hard work, creative, independent, democratic, curiosity, national spirit, love of the motherland, valuing achievement, communicative, love peace, love to read, care for the environment, care for each other, and responsible. Based on the objectives of Strengthening Character Education (PPK) attached in the Presidential Decree, it is shown that the character education is very important to be implemented in the learning process.

Moreover, the 2013 curriculum recommends the application of character education through all subjects including science teaching. The role of schools, families and communities needs to instill the learning of character (Zuchdi, et al., 2011). The implementation of character education through

subjects that create character consists of good values (noble values) that are formed in students so that the role of the school gives a real contribution. Therefore, the role of the teacher not only teaches science courses, but also instills character through learning activities and outside learning activities.

It is in line with the Center of Excellence (CoE) of University of Riau in peatland management and disaster mitigation. Environmental Education course is one of the subjects that can integrate the character values of environmental care and disaster response. Hence, this research was conducted to reconstruct the Environmental Education curriculum based on Indonesian National Qualification Framework (KKNI) through the integration of the character value of environmental care and disaster response.

2. Methodology

This research was conducted at the Faculty of Teacher Training and Education (FKIP) of Riau University from April to August, 2019. The samples of the research were 10 Lecturers who have taught Environmental Education Courses. The types of data used in this research were qualitative and quantitative data. The data were obtained from primary and secondary data. The primary data was obtained from the documentation of the use of learning devices. Meanwhile, the secondary data was obtained from the research instruments in the form of open and closed questionnaires. The open questionnaire was used as an interview guideline. The data were analyzed descriptively.

3. Result and Discussion

Environmental Education is one of the compulsory subjects at Faculty of Teacher Training and Education (FKIP) of University of Riau. The goal of the Environmental Education course is to build a sense of caring for the environment and being able to respond to problems around them. The implementation of this course is supported by the learning devices of Environmental Education that have been compiled by the course development team of Environmental Education. The learning devices that have been provided by the course development team of Environmental Education are; Instructional Plan, Power Point, Syllabus, exercises and quizzes. To know the implementation and achievement of Environmental Education courses, it is necessary to verify the materials of Environmental Education. After verifying the materials to 10 lecturers of Environmental Education courses using material verification sheets, it was found that most of the Environmental Education lecturers gave materials and assignments according to the Instructional Plan. The following are the data of the results of verification of Environmental Education material by the 10 lecturers of Environmental Education courses:

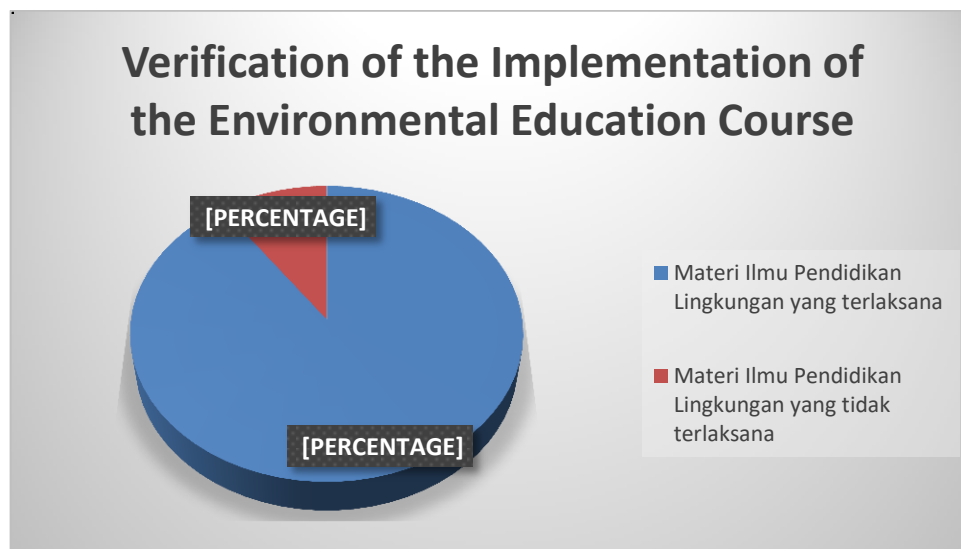


Figure 1. The Verification of the Implementation of the Environmental Education Course

Based on the graphic above, the verification of Environmental Education material is almost entirely carried out. However, it has 10% of the materials that have not been able to be implemented. The Materials which have not been implemented among all lecturers are different. It is due to the differences of priorities and lecturers' understanding of the available curriculum. The materials that have not been implemented in this course are; the application of environmental science, natural ecosystem, artificial ecosystem, aquatic ecosystem (river, reservoir, and sea), forest and peatland degradation, legal basis, environmental management instrument, environmental management efforts (pollution, utilization, maintenance, control, supervision, law enforcement), basic concepts of environmental ethics and observation of campus environmental conditions (artificial environment and analysis of campus environmental problems and reporting). The results of this verification can be used as material for environmental education course in order to conduct a reconstruction on environmental education courses and its learning tools.

The reconstruction of the Environmental Education course is a rearrangement of the Environmental Education course materials in order to achieve the goals of the course. It is due to higher education institutions is challenged to change the curriculum. The emphasis on curriculum development is not only limited to content or knowledge, but it also includes the development of learning, creative abilities, and the use of new information and communication technology (Harsono, 2007). The purpose of the course reconstruction is to adjust to the development of science and technology, the changing demands of competence, and to improve student learning outcomes (Wawan Laksito, 2013).

The reconstruction of this course is supported by the result of an interview of the implementation of the Environmental Education course at the Faculty of Teacher Training and Education at Riau University. After distributing questionnaires to 10 lecturers of Environmental Education courses with 3 aspects of discussion, the results are as follows:

1. Preparation

At this stage, it needs a preparation of learning tools. The learning tools of Environmental Education that have been provided can help the implementation of the Environmental Education course. In general, the learning tools used by lecturers were not designed independently but instead used the tools provided by the course development team of Environmental Education. There were several lecturers

who collaborated and added to the existing Environmental Education learning tools. The tools provided need to be repaired or revised related to the development of the latest environmental problems, local potential, and the growth of environmental care characters. There are a number of suggestions for improvement or compaction of materials in the Environmental Education course, such as focusing on the assessment of local problems and mitigation, environmental problems in Riau, adding the topic of bokashi, making LKM, implementing practicums, and adjusting the curriculum. The learning material of Environmental Education was not support the COE of Riau University yet due to the absence of specific discussion regarding wetlands and disaster mitigation.

2. Implementation

At the implementation of the learning stage, generally, the time allocation provided was sufficient, but it was suggested to be 3 credits. There were several materials that should be added such as practices (case studies to the field), case studies of environmental problems, environmental management, mitigation and environmental ethics. In the implementation of Environmental Education courses, the lecturers used methods of lectures, discussions, questions and answers, field observations, field practicum assignments and presentations. In this course, the students were given activities outside the classroom such as project assignments, field observations, and group assignments. The discussion of material on environmental mitigation provided by lecturers was lacking and often was not delivered. Some lecturers had conveyed about disaster response, but that was only limited to theory and not exhaustive. Some lecturers had given an understanding of environmental mitigation and disaster response, in general, the students have gained that understanding through the assignment, discussion and presentation of environmental problems.

3. Assessment

At the assessment stage, the instruments used by the lecturers in learning Environmental Education were: written, affective, product, portfolio, Mid-Test and Final-Test test, quizzes, projects, practicums, observations, questionnaires, and assignments. In general, some lecturers did not make instruments to assess the character of students. But, there were some lecturers who had provided instruments to assess student character such as the assessment of cognitive attitudes and environmental care attitudes. At the final-test, the lecturer gave questions with a variety of forms such as essay, objectives, tests, discourse, cases and research papers. The exam questions which made by the lecturer already include environmental and mitigation issues (made into a single entity, not independent). In this course, the lecturer gave special assignments to the students as evaluation such as making research papers about the environment, fostering the character of environmental love by making parks, LKM, making videos about the campus environment and arranging lectures to make it more comfortable.

In the interview results, most of the respondents stated that revising or reconstructing the Environmental Education course in accordance with curriculum development are needed. In this course, it is necessary to add some materials on environmental issues, mitigation, and local potential in Riau. The time allocation provided to implement the Environmental Education course is sufficient, but the need for time compaction in some materials and adding the time or the development of mitigation materials. It is expected that the students will be more concerned about the environment and disaster response.

The attitude of environmental care and disaster response from this Environmental Education course is to support the policies of Riau University as the Center of Excellence (CoE) in managing wetlands and disasters. The students are expected to be able to protect the environment and overcome environmental problems in Riau so that they can overcome natural disasters that often occur in Riau such as forest and land fires. The mitigation material will discuss a series of efforts to reduce disaster risk. The

disaster is an event or series of events that threaten and disrupt people's lives and livelihoods caused, both by natural and human factors (BPBD of Karanganyar Regency, 2018). To support the policies of the CEO of Riau University, reconstruction of the Environmental Education course should be carried out by adding mitigation materials to meet the objectives of Riau University as a Center of Excellence (CoE). After carrying out the reconstruction of this Environmental Education course, it will produce the latest Environmental Education learning tools in the form of Instructional Plans, Power Points, observation sheets, assessment sheets, and Student Worksheets.

4. Conclusion

Based on the results of the study using questionnaires and interview sheets with lecturers on Environmental Education courses, it is necessary to implement a reconstruction of Environmental Education course learning tools in the form of Instructional Plans, Student worksheets, and student assessment sheets.

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