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## Implementing Educational functions of Green Campus on Environmental Education Course

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**Abstract:** The objective of this research was to find out the implementation of Educational functions of Green Campus in enhancing students' scientific attitude on environmental education course. This research was a Descriptive Research. There were two study programs involved in it, namely Mathematic Education Study Program that consisted of 40 students, and Pancasila and Civic Education study Program which consisted of 37 students. The data of this research were taken from the analysis of questionnaire, observation, and interview. The result showed that there was an enhancement of students' scientific attitude. The highest enhancement of their scientific attitude can be seen from the following indicators sequentially: a) encouraging the curiosity is at 96.10%, b) prioritizing the proof and be skeptical is at 92.21%, c) can work together is at 81.82%, d) be positive towards failure is at 74.03%, and e) accepting differences is at 72.73%. The result of observation and Interview asserts that the students were very enthusiastic in understanding the environmental concepts and conservation efforts based on local culture.

Keywords: Green Campus, Students Worksheet, Scientific Attitude

### 1. Introduction

*Green Campus* is a concept of environmental management within the campus that involves the entire academic community. Utomo (2007) explains that the *green campus* is a campus that has a conception of environment which integrates environmental knowledge into policies, management, and the activity of Tri-Dharma University. It has the intellectual capacity and resources in integrating science and environmental values into its missions and programs. Green campus must also be a model of the implementation of integrating environmental science in all aspects of management and sustainable development best practices.

The purpose of Green Campus concept is not only to enhance prestige, but also in order to strive the awareness of individuals towards campus environment by familiarizing themselves with always maintaining and preserving the environment. Salatin in Ruby & Nani (2013: 183) says that in realizing the concepts of environmental-friendly campus, eco-friendly campus, green campus, sustainable campus, conservation campus or other terms that actually have the same principles, namely environmental perspective, it needs to be supported by every academic community in it. In Utomo's research (2007), it showed that generally there are five benefits and the role of green campus in sustainable development; a) micro-ecosystem services, b) resource conservation, c) the tri-dharma activities, d) tourism campus, and e) a mini model of sustainable higher education management.

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The expansion of Green Campus concept in one of institutions can be associated with various aspects. One of them is in the aspect of Education. Its implementation has purpose to change the mind-set of individuals, paradigm, point of views, knowledge, attitude, and behavior of a person towards the environment. The environment is not only a place or means to be enjoyed, exploited, and spent, but a sense of awareness must arise to safeguard and preserve the environment. It can be implemented in the teaching-learning processes. The development of the concept of green campus in an institution can be related to various aspects, and one of them is the aspect of education. The application of education aspects of green campus aims to change the mind-set, paradigm, perspective, knowledge, attitudes, and behavior of a person towards the environment. The environment is not only a place or means to be enjoyed, exploited, and spent, but a sense of awareness must arise to safeguard and preserve the environment. It can be implemented in the teaching-learning processes. One of the research results of Wan Syafii and Putra (2016) regarding to the development of the function of green campus education is the students worksheet or known as LKM. It can be implemented in any courses that are directly related to the green campus that is the Environmental Education course.

The Environmental Education Course is a faculty compulsory subject. It means that all Study Programs in Faculty of Education and Teacher Training (FKIP) of Riau University are required to take the course. It is presented with a weight of 2 credits, which is presented in the second semester. The lecturers of Environmental Education course are lecturers of FKIP of Riau University, who have previously been briefed and have knowledge in the field of Environmental Education. Using Students-worksheet as one of the products of the education function of a green campus, it is necessary to test the effectiveness of the product in relation to various variables that are closely related to improving the quality of students. In this study, the researchers highlighted the effectiveness of LKM on students' scientific attitudes.

Scientific attitudes are the combination of a number of mental habits, or a tendency to react consistently in certain innovative ways or in extreme situations. These habits or tendencies include accuracy, intellectual honesty, Open-mindedness, critical thinking, and the habit of seeking the truth of a causal relationship. This habit is important in everyday life that directs us to think, and habits are not only for scientists but also for all people (Sekar, 2013).

Muslich's opinion (2008 in Setyaningrum and Husamah, 2011) asserts that scientific attitude is an attitude that must exist in a scientist and academics including lecturers and students when facing scientific problems. The scientific attitude that became the focus of this study was the scientific attitude of students during the process of observing, analysing, and finding solutions to reduce the amount of pollution that occurred within the campus, BinaWidya, University of Riau.

Carin&Sund (1997) in Science for All Americans: The 2061 Project describes some attitudes and values that can be enhanced through scientific work; (1) fostering curiosity (being curious) in understanding the world around them, (2) prioritizing the proof, (3) being skeptical, (4) accepting differences, (5) being able to work together (cooperatively); (6) being positive about failure. All types of scientific attitudes that have been put forward by some experts will not be fully realized if they are not supported by the role of educators (lecturers or teachers).

By the importance of implementing educational functions of green campus and the enhancement of students' scientific attitude, the researchers tried to conduct a research in order to find out how far "The implementation of educational functions of green campus in enhancing students' scientific attitudes on Environmental Education Courses?"

## 2. Methodology

This research was conducted from March to September, 2018. The location of the research was administered at the department of FKIP, University of Riau, which consisted of 2 Study Programs; Mathematics study program consisted of 40 students, while Pancasila and Civic Education study program consisted of 37 students. This research was a descriptive research which aims to see how far the Educational Function of Green Campus is implemented on students' scientific attitude at FKIP, University of Riau. Descriptive research is a research method aimed at describing and interpreting existing phenomena that take place at present or in the past. This research is also often called non-experimental research because there is no control and manipulation of research variables. Sukardi (2008) describes the main objectives of descriptive research. They are systematically describing the facts and characteristics of objects or subjects that are examined appropriately. Descriptive research has several uniqueness including using questionnaires and interviews.

The data collection of students' scientific attitudes was carried out during the activity by using observation sheets and questionnaires given at the end of the semester. The indicator used in measuring student's scientific attitude is an indicator of Carin&Sund's scientific attitude. For more details, see Table 1.

**Table1.** The Data Analysis

Independent Variable	Dependent Variable	Instruments	Type of Data
Educational Function Green Campus (Student Worksheet)	Scientific attitude (Refferingto the Scientific attitude indicators of Carin&Sund)	Observation sheet	Qualitative
		Questionnaire	

## 3. Result and Discussion

The students' worksheet (LKM) is as one of the products of the Green Campus that covers the learning activities with an inquiry approach, active learning, local culture-based environmental conservation, and problem solving. It also covers 4 main materials which is the core of environmental education teaching-learning process. This LKM is very suitable for increasing various competencies of students. The results showed that the implementation of the Green Campus using LKM on environmental education course, generally, can enhance students' scientific attitudes.

Based on the indicators of scientific attitudes, it can be concluded that the students give positive responses or responses related to the implementation of the Green Campus using LKM on environmental education course. Sequentially, the highest indicators of scientific attitude are fostering curiosity is at 96.10%, prioritizing proof and being skeptical are at 92.21%), being able to cooperate is at 81.82%, being positive towards failure (74.03%), accepting differences is at 72.73%. For more details, see Table 2.

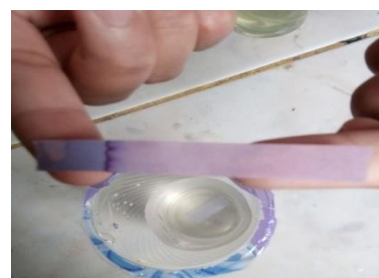
**Table 2. The Data of Students' Scientific Attitude**

No	Indicators	The percentage of items*				Accumulated Response**	
		SA	A	D	SD	Positive (%)	Negative (%)
1	<i>Being Curious</i>	35,06	61,04	3,90	-	96,10	3,90
2	Prioritizing proof	25,97	66,24	5,19	2,60	92,21	7,79
3	Beingskeptical	28,57	63,64	7,79	-	92,21	7,79
4	Accepting differences	19,48	53,25	20,78	6,49	72,73	27,27
5	Being cooperative	29,87	51,95	16,88	1,30	81,82	18,18
6	Being positive towards failure	22,08	51,95	18,18	7,79	74,03	25,97

From the Table 2 above, it is also strengthened by the results of students' observations and interviews. The results confirm that students are very enthusiastic with direct observations related to the phenomenon of environmental damage around them. It is proved from their initiative and strong curiosity regarding the level of environmental damage as shown in the following pictures:



a. Taking water sample



b. Testing with litmus paper



c. Discussing the result of observation

The pictures above describe the students' activities that show the enhancement of scientific attitudes, especially in fostering curiosity, prioritizing the proof, being skeptical, and cooperative. Scientific attitude is the attitude of a scientist during the research / experiment process, which is a tendency and readiness to respond (Putra and Redjeki, 2013). It is also a

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tendency for someone to act in solving a problem. Scientific attitudes cannot be formed without learning activities. Learning activities can not only be done in class, but can also be done outside the classroom. Through the implementation of Green Campus using LKM, the students' scientific attitude can be enhanced. Implementing educational function of Green Campus using LKM can also help students in understanding the concept of the environment and efforts to preserve the environment based on local culture.

Rahyono states that local wisdom is human intelligence possessed by certain ethnic groups obtained through community experience. It means that the local wisdom is the result of certain communities through their experience and not necessarily experienced by other communities. The results can be in the form of values that will be very strongly attached to certain communities that have gone through a long time, throughout the existence of the community (Fajarini, 2014). Verawati and Affandi (2016) assert that local wisdom is an ancestral heritage or ancestor that must be preserved because it implicitly is the identity of the region. The existence of local wisdom in an area is an important part in improving the welfare of the community. Local wisdom has the potential to change the mind-set towards a better direction. Hence, by the progress of the times that are increasingly rapid, it is needed various efforts to preserve the local wisdom of an area. Fostering an understanding of the importance of local wisdom from an early age is carried out in families, communities and schools / colleges. Universities as the highest institutions at the education unit level must have a model to foster the understanding of local wisdom through various policies, especially through learning activities. Indirectly, fostering the concept of local wisdom leads to environmental conservation. Environmental problems are a major problem at the global level. By implementing the educational function of Green Campus at University of Riau in form of LKM, the students' understanding of environmental conservation based on local culture is enhancing. It is proved by the increasing of their scientific attitude

Moreover, Sartini (2006) explains that local wisdom has many functions. They are functioning for the conservation and preservation of natural resources, functioning for the development of human resources, functioning for the development of culture and science, functioning as advice, trust, literature and abstinence, social meaning such as communal / kinship integration ceremonies, social meaning, for example in the agricultural cycle ceremony, meaning ethics and morals, and meaningful politics. This statement emphasizes the existence of local culture greatly influences environmental preservation, and the implementation of educational function of green campus through LKM is one of the efforts to foster the concept of local culture-based environmental preservation by the enhancement of students' scientific attitudes.

#### **4. Conclusion**

The implementation of educational function of green campus on environmental education course, generally, can enhance students' scientific attitudes. The highest enhancement The highest enhancement of their scientific attitude can be seen from the following indicators sequentially: a) encouraging the curiosity is at 96.10%, b) prioritizing the proof and be skeptical is at 92.21%, c) can work together is at 81.82%, d) be positive towards failure is at 74.03%, and e) accepting differences is at 72.73%. The result of observation and Interview asserts that the students were very enthusiastic in understanding the environmental concepts and conservation efforts based on local culture.

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