Conference Paper

UNNES Goes Conservation: Among Students' Knowledge, Perception and Attitude of Students' Environmental Conservation

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Abstract

UNNES has a vision of becoming a conservation-oriented and internationally reputed university. It makes UNNES carries out the policies to aware and to implement the conservation values. There are 8 (eight) pillars of conservation; however, the study focuses on 5 (five) pillars which are directly on the environment. The other 3 (three) pillars relate to the culture and character conservation. The objective of the study is to understand the real condition of Students' Environmental Conservation after implementing some conservation programs and policies conducted by UNNES.

It is a quantitative research taking students from UNNES (UNNES) as the population. The total population was 24,000 students and with Slovin formula; there were 393 students as the samples. Data were collected by distributing the questionnaires with 3 (three) variables; knowledge, perception, and attitudes of UNNES students on environmental conservation. Then the data were analyzed descriptively and inferentially. All data were processed using SPSS 23.5 for Windows.

The results of the study showed which; 1) 52% of respondents have high knowledge on Environmental Conservation; 2) 50% of the respondents have very high perception on Environmental Conservation; 3) 61% of respondents have good attitude on Environmental Conservation; and 4) simultaneously; Knowledge students (X1) and students' perception (X2) have effects for 66.5% on their attitudes on environmental conservation (Y). Next, the partial results of students' knowledge (X1) had an effect for 35.9% on their attitudes on environmental conservation (Y) and students' perception (X2) had an effect for 61.3% on their attitudes on environmental conservation (Y). It means that students already have good environmental knowledge, perception and attitudes on conservation. It is suggested to improve students' attitudes on conservation by improving their knowledge and perception.

Keywords: Knowledge, Perception, Attitude, Environmental Conservation

1. Introduction

Universitas Negeri Semarang (UNNES) as one of the state universities has a distinctiveness as a conservation university, which is chave everrned on the environment.

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UNNES as a conservation university clearly should carry out conservation education for students both educational and non-educational study programs. In the Competency and Conservation Based Curriculum developed by UNNES the values of conservation character are; inspirational, humanistic, caring, innovative, sportive, creative, honest and fair. Internalization of conservation values in students is a an important step for the education process to shape one's character.

According to the Law of the Republic of Indonesia Number 5 of 1990, environmental and natural resource conservation is an environmental management whose utilization is carried out wisely to ensure the sustainability of inventories and to maintain and improving the quality of the environment. However, the facts was and printed in December and January 2019 there was flood at UNNES. Pratikno (2018) [1] stated which heavy rains accompanied by strong winds hit the UNNES area resulting in flood. The flood which flows into the road makes troubled and jammed. The flood scenes of UNNES were immortalized by the surrounding community, make this incident was uploaded to YouTube and distributed through WhatsApp. According to the news quoted from RadarTegal.com (2016) [2] stated which, due to clogged garbage the area of the UNNES complex has poor drainage and has the potential to become a flooded customer when heavy rain is pouring. Nugroho (2017) [3] stated which the floods at UNNES region quickly receded, but it made the activities of residents using the access road disrupted. It makes some parties wonder because UNNES is a university which has been declared a conservation-minded campus since 2010.

Furthermore, there are several factors make flood can occur at UNNES; such as the behavior of Sekaran Village people, policies; the behavior of many sellers and also the behavior of the UNNES academic community. Therefore; a comprehensive study and support from many parties is needed to be able to analyze it properly.

The research only focuses on students' knowledge, perception and attitudes on environmental conservation. It is done because students who are studying in UNNES also automatically socialize around the UNNES Campus. Then, students are also the target of UNNES policy in implementing conservation.

Aina (2015) [4] states that every citizen of UNNES is obliged to support the implementation of conservation-based campus governance and each work unit should encourage and facilitate the development of conservation-based campus governance. Then; it makes UNNES carry out many policies make the academic community is able to implement conservation.

Conservation is an effort to protect and manage carefully the environment and natural resources. There are 8 (eight) pillars of conservation; but this study focuses on 5 (five)

pillars which are directly on the environment. Whereas; the other 3 (three) pillars relate to the conservation of culture and character.

There are many environmental conservation policies which have been carried out by UNNES include policies; for example bicycle riding, mass tree planting, reforestation, the prohibition of smoking in air conditioners, reducing paper use, management policies and reducing waste and waste production at UNNES, environmentally friendly vehicle policy and policy protection, preservation, utilization and development of the flora and fauna environment in UNNES and its surroundings.

Students should have conservation behavior so they can carry out conservation principles in their daily lives. The policy is expected to be able to shape students' knowledge, perception and attitudes on environmental conservation. Based on this, research is needed to determine the condition of students on students' knowledge, perception and attitudes on environmental conservation. Furthermore, it is necessary to analyze whether students' knowledge and perception give effect on students' attitudes on conservation behavior. It is important to achieve the UNNES vision.

1.1. The Research Questions

Based on the background above, the research questions are:

1. Is there any positive and significant effect of students' knowledge on students' attitude about environmental conservation?

2. Is there any positive and significant effect of students' perception on students' attitude about environmental conservation?

3. Is there any positive and significant simultaneous effect of students' knowledge and students' perception on students' attitude about environmental conservation?

1.2. The Research Objectives

Based on the formulation of the problem above, the research objectives are to:

1. Analyze the effect of students' knowledge on students' attitudes about environmental conservation;

2. Analyze the effect of students' perception on students' attitudes about environmental conservation;

3. Analyze the simultaneous effect of students' knowledge and perception on students' attitudes about environmental conservation.

2. Literature Review

2.1. Conservation Pillars in Universitas Negeri Semarang (UNNES)

2.1.1. Biodiversity

According to the World Wildlife Fund in Indrawan et al. (2012) [5] biodiversity is millions of plants, animals and microorganisms including those creatures having the complex ecosystems which they form into the environment. Walujo (2011: 1) [6] states that saving biodiversity means taking steps to protect genes, species, habitats or ecosystems. Therefore; saving biodiversity also means preventing the decline of the main natural ecosystems and managing and protecting them effectively.

The pillar of biodiversity conservation aims to protect, preserve, use and develop wisely and sustainably on the environment, flora and fauna. The program on the pillars of biodiversity conservation includes inventory, monitoring of flora and fauna, nursery activities, planting, and plant care. Geographically, UNNES is located in a mountainous area with diverse topography and has a relatively high level of biodiversity, both flora and fauna.

2.1.2. Green Architecture and Internal Transportation

Green architecture is a building or built environment which can reduce or make efficient use of material resources, water and energy, in a broader sense, is a building or built environment which is efficient in the use of energy, water and all resources existing, able to maintain the safety, security and health of its occupants in developing the productivity of their inhabitants, able to reduce waste, pollution and environmental damage (Irawan, 2017: 94) [7]. UNNES develop guideline inclusion structure eco-friendly use of the current building with a new function, development of bike paths and walking, use of environmentally friendly transportation, creation of shelter bicycles, manufacture example catchment wells, and modeling of energy-efficient buildings

It aims to establish a culture of environmentally friendly on the campus environment. In the early stages since the UNNES declaration as a conservation university the development of bicycle and walking paths has been carried out.

2.1.3. Waste Management

Irawan (2017: 96) [8] states that waste management includes recycling of paper, plastic, metal / cans, laboratory waste processing, and processing of dried flowers / leaves. Since 2009, UNNES has separated the trash of organic waste and inorganic waste in every building in UNNES. The continuation program of this waste separation is the existence of sustainable management consistent with the type of waste, organic waste is managed into compost, while inorganic waste is sorted to be recycled or sent to landfill.

The waste management pillar aims to reduce, manage, supervise waste production, and improve environmental conditions at UNNES to create a clean and healthy environment. The waste management pillar program is realized with the following activities:

1. Reuse of unused items;

2. Reduction of activities and / or objects which have the potential to produce waste (Reduce);

3. Recycling waste to be recycled;

4. Restoring the functions of facilities at UNNES which have been reduced to recovery.

2.1.4. Paperless Policy

According to Ramadoss and Moli (2011) [9] sustainable conservation has a goal to meet the needs of the present without sacrificing its next generation, by finding solutions to social and environmental problems in order to live sustainably, if we want to survive as a species. McAlpine and Wotton (2009)[10] mention efforts to carry out conservation (ecosystem services) generally include four types: provision, regulation, culture, and support. The non-paper policy pillar aims to implement conservation-oriented administration and administration efficiently.

The non-paper policy pillar program is implemented through optimization of information technology-based systems, efficiency of paper use, utilization of recycled paper, and use of environmentally friendly paper. The use of Information Technology in UNNES is expected to be able to open up opportunities to significantly reduce paper use in correspondence and documentation through Paperless Policy. The implementation of this policy applies in the management of information technology-based academic administration, management of office-based office document administration and design of e-Administration.

In other words, the paperless policy is a program to minimize paper use by utilizing information technology owned by UNNES, including developing web-based application systems, developing online publishing, improving supporting facilities, and developing organizations. Paperless policy is expected to reduce paper consumption without reducing work effectiveness and is an effort to prevent global warming and to restore forest function as the world's lungs.

2.1.5. Clean Energy

The program is an effort to utilize renewable energy sources and the use of energy efficient technologies with an energy-saving culture. Energy solar (solar energy) is the simplest renewable energy source, make with the application of solar panels at several main points, the campus will reduce electricity consumption from PT. PLN; it is developing biofuel. The process composting from biomass is an alternative to obtaining biofuel and is integrated into an organic waste treatment system.

Wind power is a source of energy which can be utilized at UNNES by making wind turbines in open areas of the campus and synergizing with solar panels.Then„ socialization of the UNNES academic community and the environment around the campus was also carried out to support the implementation of policies green energy (Irawan, 2017: 95) [11]. The pillar of clean energy aims to save energy through a series of policies and actions to use energy wisely, and the development of environmentally friendly renewable energy. The clean energy pillar program is implemented by:

1. Saving the use of electrical energy-based equipment and fossil fuels consistent with energy use strategies;

2. Developing campus facilities which support energy savings;

3. Developing environmentally friendly energy.

2.2. Definition of Knowledge

According to Indonesian dictionary; knowledge is defined as everything which is known; intelligence: or anything which is known on things (subjects). Then, Pudjawidjana defines knowledge as a reaction which exists in humans with all the stimuli which occur in the sensory devices to do remote sensing on certain objects.

A person's knowledge of an object contains two aspects; they are positive and negative aspects. Both of these aspects will determine a person's attitude, the more

positive aspects are more positive on a particular object (Fidel & Pejtersen, 2004) [12]. Knowledge arises when someone uses his mind to recognize certain objects or events which have never been seen or felt before (Ghoni & Abdul, 2012) [13].

Based on the description can be concluded which knowledge is something which is obtained from the results of human thinking in the form of information. The process of knowing which is like seeing, hearing, feeling, and thinking which becomes the basis of man and acts and acts.

2.3. Definition of Perception

According to Schiffman and Kanuk (2000: 146) [14], perception is process by which individuals selects, organizers, and interprets stimuli into the a meaningful and coherent picture of the world. More or less which perception is a thing the process which makes someone choose, organize and interpret the stimuli received into a meaningful and complete picture of the world. While Kotler and Armstrong (1996: 156) [15] suggest which in the same situation, perception someone about a product can vary, it is caused by the selection process many existing stimulus. In essence, perception will relate to someone's behavior in make decisions about what you want.

Notoatmodjo (2003) [16] states that perception is a complex process in choosing, regulating and interpreting sensory stimuli to get a meaningful picture of things which can be in the form of five senses, knowledge, experience and can survive in someone for a long time. Perception intertwined by obtaining special knowledge about objects or events at a given moment, then the perception occurs every time the stimulus moves the senses.

Perception can also be interpreted as a process of paying attention, selecting, organizing and interpreting environmental stimulus. Environmental stimuli are considered and selected through the five senses of the sense of hearing, feeling, sight, smell and touch. Sofyan (2008) in Peli (2015) [17] states that the factors which play a role in the formation of perception are cognition, affection, personality and culture possessed by someone who comes from the reality which exists in his environment, past experience and the final state of one's emotions and motivations.

2.4. Definition of Attitude

Robbins (2006: 169) [18] states that attitudes are statements or Evaluative assessment relates to objects, people or an event. Then, Simamora (2002: 14) in Wahyuni (2008:

35) [19] state that in the attitude there are three components; they are 1) Cognitive component: trust consumers and knowledge of objects. Which object is meant as a product attribute, the more positive the trust in a brand things then the whole cognitive component will support the overall attitude. 2) Affective component: emotion which reflects the feelings someone on an object, what is an object it is desired or liked. 3) Behavioral component: reflects trends and the actual behavior of an object, which one this component shows the tendency to take action. Loudan & Delabitta (2004: 217) [20] define the cognitive component as a belief in something.

2.5. Research Hypotheses

1. H_a1 = there is a positive and significant effect of students' knowledge on students' attitudes about environmental conservation;

2. H_a2 = there is a positive and significant effect of students' perception on students' attitudes about environmental conservation;

3. H_a3 = there is a positive and significant simultaneous effect of students' knowledge and perception of students' attitudes about environmental conservation.

2.6. Operational Definition

(X1) Knowledge is about the knowledge of respondents in understanding environmental conservation which consists of 5 (five) pillars of environmental conservation; they are biodiversity conservation, green architecture and internal transportation systems, waste management, paperless policies, and clean energy. These aspects are given the total score. The total score measurement results are divided into 5 categories; very bad, bad, neutral, good and very good.

(X2) Perception, related to the opinions and judgments of individuals on environmental conservation. Perception is measured using 5 scales of Likert; Strongly Agree (Score 5), Agree (Score 4), Neutral (Score 3), Disagree (score2), strongly disagree (score1). The total score measurement results are divided into 5 categories; very bad, bad, neutral, good and very good.

(Y) Attitude, is readiness and willingness to react to the implementation of environmental conservation and the efforts made by respondents. Attitude is a tendency to act in someone. Attitudes were measured using Likert scale; Strongly Agree(Score 5), Agree (Score 4), Neutral (Score 3), Disagree (score2), Strongly disagree (score1). The

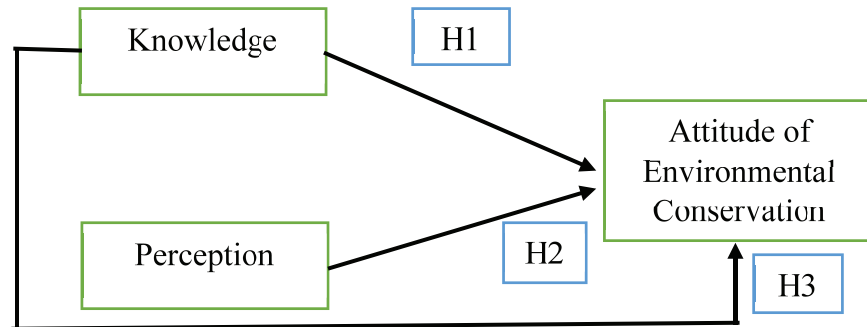total score measurement results are divided into 5 categories; very bad, bad, neutral, good and very good.

Figure 1: Theorytical Framework.

3. The Research Methods

This research is a quantitative study with a population of all active students of UNNES class of 2015 - 2018. The total population is 24000 students. The sampling technique used Slovin formula and got 393 students. Data are collected through questionnaire distribution with 3 (three) variables; they are knowledge, perception, and attitudes of students on environmental conservation. Then, data are analyzed descriptively and inferentially. Data are processed using SPSS 21 for Windows. The following are the results of the validity and reliability of the statements on the questionnaire distributed, as follows:

TABLE 1: Validity and Reliability Result.

Statements	Validity	Reliability
KNOWLEDGE		
I know UNNES has massive and routine planting programs.	0.000	0.743
I know UNNES maintains biodiversity at campus.	0.000	0.743
I know UNNES is a green campus.	0.000	0.743
I can see trees and plants at UNNES.	0.000	0.743
I know UNNES develop environmentally friendly electric cars.	0.000	0.743
I know UNNES able to manage good and regular organic waste.	0.000	0.742
I know UNNES able to manage waste inorganic well and regularly.	0.000	0.741
I know that waste recycling products developed by UNNES.	0.000	0.743
I know UNNES does paperless management well.	0.000	0.742
I am used to collecting soft file assignments to lecturers.	0.000	0.743

Statements	Validity	Reliability
I know the use of fans to cool the classrooms in UNNES because the use of air conditioning is not environmentally friendly.	0.000	0.741
I know that UNNES installed solar cell lights without electricity and is environmentally friendly.	0.000	0.742
I know that UNNES save electricity and water usage.	0.000	0.741
I know that there are slogans and suggestions spread across billboards and banners to use energy saving.	0.000.	0.741
PERCEPTION		
I am pleased with the massive and routine tree planting policy held by UNNES.	0.000	0.740
I feel happy when visiting parks and gardens in UNNES which are a form of biodiversity conservation.	0.000	0.743
I have no objection to reduce the use of motorized vehicles within close proximity.	0.000	0.744.
I am happy when walking to the Faculty and the UNNES conservation environment because I can see the campus.	0.000	0.743
I don't mind for using fan in may daily life.	0.000	0.743
I agree on the use of personal bottles and shopping bags to reduce the use of plastic which leads to waste.	0.000	0.743
I do not mind to recycle organic waste.	0.000	0.743
I do not object to recycle inorganic waste.	0.000	0.743
I agree the attitude of re-checking documents before they are printed out to avoid mistakes and supporting paperless.	0.000	0.743
I am happy when making handicrafts which have economic value using used paper materials.	0.000	0.744
I have no objection to promote clean energy to support environmental conservation.	0.000	0.743
I agree to use sunlight for lighting in the daytime so as to save electricity.	0.000	0.742
I like to take part in activities on biodiversity conservation even though I have to pay personal costs.	0.000	0.742
I do not mind using public transportation in an effort to reduce environmental pollution.	0.000	0.742
I like to carry out waste management.	0.000	0.742
I agree to waste paper management efforts even though it requires initial capital.	0.000	0.744
I agree to the conservation policy carried out by UNNES.	0.000	0.743
I agree to the use of green architecture in UNNES.	0.000	0.744
I want to follow the waste management movement through compost houses in UNNES.	0.000	0,744
ATTITUDE		
I contribute to tree planting organized by UNNES.	0.000	0.746
I have visited UNNES botanical garden as a form of biodiversity conservation.	0.000	0.743

Statements	Validity	Reliability
I reduced the use of motorized vehicles in a distance of close to.	0.000	0.743
I walked to the Faculty and the conservation environment UNNES.	0.000	0.743
I reduced the use of electricity in everyday life.	0.000	0.743
I used a personal bottle and shopping bag to reduce plastic use which leads to waste.	0.000	0.740
I have recycled organic waste.	0.000	0.743
I have recycled inorganic waste.	0.000	0.744
I researched documents before printing out to avoid mistakes and support paperless.	0.000	0.743
I have ever made valuable crafts economical using used paper materials.	0.000	0.743
I use sunlight for daylight saving electricity.	0.000	0.743
I participated in biodiversity conservation activities even though I had to pay.	0.000	0.743
I used public transportation to reduce environmental pollution.	0.000	0.743
I did waste management in the environment around being economical.	0.000	0.744
I am careful in the print out of the document to avoid wasted financing on the wrong document.	0.000	0.744
I use a low power bed lamp to reduce electricity use.	0.000	0.744
I support conservation policies carried out by UNNES.	0.000	0.744
I support the use of green architecture in UNNES.	0.000	0.744
I support the movement of waste management through compost houses in UNNES.	0.000	0.744
I feel which the use of solar panel lights will reduce electricity use in UNNES.	0.000	0.743

Source: The processed research data, 2019

From the table above it can be seen which all statements are valid and reliable. This can be proven by the significance value of each statement <0.05 and the reliability value> 0.7.

4. Results and Discussion

4.1. Descriptive Analysis

4.1.1. The Effect of Students' Knowledge on Students' Attitudes on Environmental Conservation

Based on research data collected, the results can be seen in the following figure.
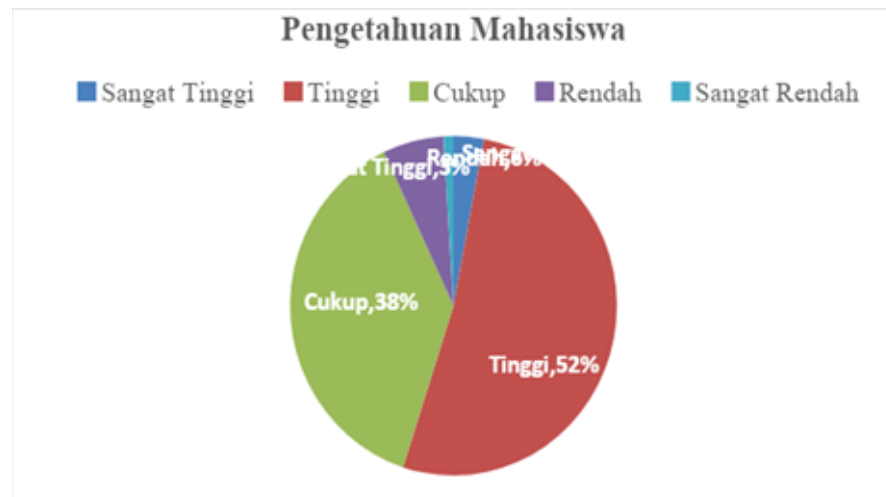
Figure 2: Results of Knowledge Students' knowledge Percentage.

Based on Figure 1. The respondent's understanding of environmental conservation which will impact on campus life and the lives of the respondents themselves. Djamhuri (2011: 19) [21] states that knowledge should only be based on facts exists, not on the basis of values.

UNNES students through the curriculum implemented now require UNNES students to take part in Conservation Courses as General Courses. There are also seminar activities on conservation. It is supported by the existence of a conservation group at the faculty level which focuses on implementing the vision of conservation insight at the faculty level. Then,, students are also required to take part in many activities to get to know nature and care for them such as mass tree planting, cleaning the campus environment, and social service.

The academic and non-academic activities turned out to be able to make students know and understand about conservation. As seen in Figure 1. that 52% of respondents in the high category are knowledge variables and 3% is in very high category. Meanwhile, 38% of respondents chose neutral categories and 6% of respondents is in low category. Furthermore, only 1% chose the very low category.

UNNES students know that UNNES has many policies to care for nature and the environment. Students also know that environmental conservation is an effort for a better balanced life of humans, animals, plants and nature. It is consistent with the one examined by Arcury (1990) [22] which states that more knowledge on environment, it can improve environmental attitudes, and both environmental knowledge and attitudes are assumed to effect environmental policy. It means that increased knowledge in the environment will change attitudes on the environment.

4.1.2. The Effect of Students' perception on Students' attitudes on Environmental Conservation

Perception is the opinion or way of view of respondents good or bad for something. Martín et. al (2016) [23] states that there are several factors which influence perception such as education about the environment, morale, gender, age, etc. The following is a quote in his research which:

> "The associations were found of the educational environment and the development of lifelong learning (P = +29; p = 0.03. Gender, age, and moral perception of the development of some elements of medical professionalism and the perception of the educational environment".

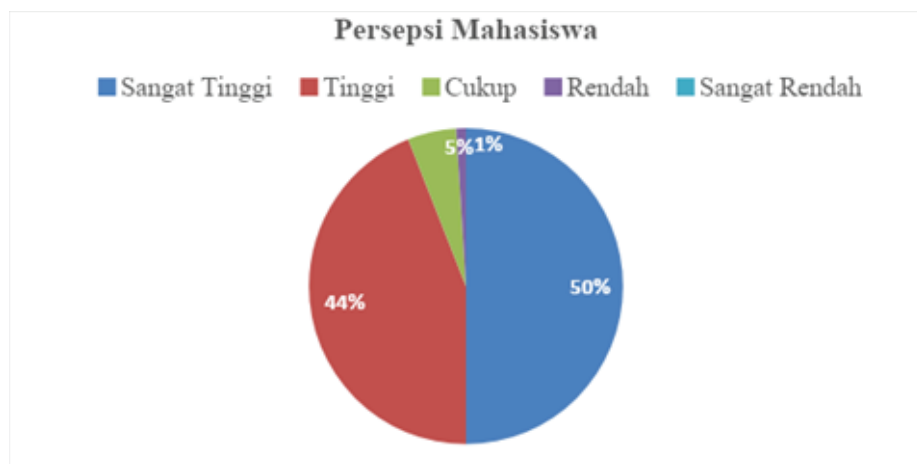The following are the results of the perception analysis of UNNES students:

Figure 3: Result of Students' perception Percentage.

Respondents' perception of environmental conservation will have an effect on campus life and its surroundings, where students have a role in it. Based on Figure 2; it can be seen which 50% of respondents is in very high category in the perception variable and 44% of respondents chose the high category. Meanwhile, 5% of respondents is in high category and 1% of respondents is in low category. Furthermore, no one chose the very low category.

Positive perception of students effect students' attitudes in environmental conservation. Perception interprets the existence of good students' knowledge of environmental conservation. The active contribution of students in caring for the environment also strongly supports environmental conservation.

When compared 55% of students are highly knowledgeable and very high and 94% of students have high and very high perception. It means that even though students

do not have high or very high knowledge, students have high or very high perception. Perception relates to the opinions and judgments of students on students' attitudes on environmental conservation. It means that all students who are well-informed will have good perception; not even all students who know about environmental conservation also perceive well.

It is consistent with the research conducted by Baskoro (2008) which states that 14.3 percent of respondents were highly knowledgeable and 14.3% of respondents were also at high perception. All respondents who are well-informed, have good perception too.

4.1.3. The Effect of Students' knowledge and Perception on Students' attitudes on Environmental Conservation

Attitudes on the environment are not only influenced by external factors but also personal feelings. It is consistent with the research conducted by Kaiser et al. (1999) [24] state that:

> "Rational and rational behavior behaviors which are at least partially moral, such as ecological behavior. The expanded rational-choice model of the environmental attitude which extends into the moral domain by using feelings of personal obligations on the environment (i.e., feelings of responsibility) and an additional predictor of intentions to behave ecologically".

Pothitou, et. al (2016) [25] found that good knowledge will form a good attitude. The following is the quote which the empirical survey shows significant correlations which indicate which residents with positive environmental values and greater environmental knowledge are more likely to demonstrate energy behaviours, attitudes and habits which lead to energy saving activities in households.

Based on the results of the descriptive analysis above, inferential analysis is needed to determine the effect of knowledge (X1) and perception (X2) on students' attitudes (Y) on environmental conservation. This study uses regression analysis with SPSS 21.

4.2. Inferential Analysis

4.2.1. Simultan Test (Test F)

Based on Table 1. which seen in column F, indicates which the F value is 390.723 with a significance of 0.000. Significance of 0.000 <0.005, it can be concluded which

TABLE 2: Simultaneous Test Result (F Test).

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23566.523	2	11783.262	390.723	.000^b
	Residual	11761.446	390	30.158		
	Total	35327.969	392			
a. Dependent Variable: Attitude						
b. Predictors: (Constant), Perception, Knowledge						

knowledge and perception have a positive and significant effect on students' attitudes on environmental conservation.

4.2.2. Partial Test (Uji t)

TABLE 3: Multiple Linear Regression Analysis.

Coefficients^a									
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	8.915	2.574		3.463	.001			
	Knowledge	.349	.046	.294	7.599	.000	.683	.359	.222
	Perception	.651	.043	.593	15.303	.000	.786	.613	.447
a. Dependent Variable: Attitude									

Based on table 2. it can be seen which knowledge and perception have a significance value of 0.000 <0.05 which means that there is a positive and significant effect on students' attitudes on environmental conservation. Furthermore, this study has a regression equation Y = 8.915 + 0.349X1 + 0.651X2. There is a positive effect of knowledge on attitudes. It is similar to the one examined by Arulrajah, A. (2016) [26] which states that

There is a positive relationship of environmental training and environmental attitude of employee. Similarly, environmental attitude of employee has a positive relationship with environmental orientation of organization.

Furthermore, perception also have a positive effect on students' attitudes. It is consistent with the research conducted by Liobikien G., G., & Juknys, R. (2016) [27]. They

found that the most important direct determinants of environmental behavior were self-transcendence value orientation, environmental problem perception, and the assumption of responsibility.

4.3. The Coefficient of Determination Test (R Square)

TABLE 4: Results of the Simultaneous Determinant Coefficient.

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.817[a]	.667	.665	5.492	.667	390.723	2	390	.000	1.778
a. Predictors: (Constant), Perception, Knowledge										
b. Dependent Variable: Attitude										

Based on Table 3. which R Square is 0.665 or 66.5%. It means that 66.5% of the effect of students' attitudes on environmental conservation can be explained by two independent variables; they are students' knowledge and students' perception. Furthermore, 33.5% of other effects are explained in other variables outside the research model.

TABLE 5: Results of Partial Determinant Coefficients.

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	8.915	2.574		3.463	.001			i
	Knowledge	.349	.046	.294	7.599	.000	.683	.359	.222
	Perception	.651	.043	.593	15.303	.000	.786	.613	.447
a. Dependent Variable: Attitude									

Based on Table 4. that partially the effect of students' knowledge on students' attitudes on environmental conservation is 0.359 or 35.9%. While the effect of students' perception of students' attitudes on environmental conservation amounted to 0.613 or 61.3%.

The expectation is which this good attitude can eventually become a behavior. It is consistent with what was examined by Clark et al. (2016) who found that behavior come into a habit which will eventually bring changes in society and the environment.

5. Conclusion and Suggestion

Based on the results and discussion of the research, it can be concluded which 1) 52% of students are highly knowledgeable; 2) 50% of students have a very high perception; 3) simultaneously students' knowledge variables (X1) and students' perception (X2) have an effect of 66.5% on students' attitudes on environmental conservation (Y). Meanwhile, partial results were obtained which students' knowledge (X1) had an effect of 35.9% on the attitude of environmental conservation and students' perception (X2) had an effect of 61.3% on students' attitudes on environmental conservation.

The results of the study show that students have knowledge and perception on environmental conservation. Knowledge and perception have a positive and significant effect on students' attitudes on environmental conservation. There are many factors which are not explained in the research model and might able to significantly effect the attitude of environmental conservation in students.

Based on the results and discussion, suggestions which can be given in this study are further researchers who are expected to be able to add many variables which are able to effect students' attitudes on environmental conservation based on international journal references and previous studies. Furthermore, researchers are also expected to provide a focus of attention to other stakeholders such as the community, lecturers, institutions, sellers and others. Thus; to get more comprehensive description of environmental conservation at UNNES, the next researcher can use other variables to mediate the independent variable with the dependent variable,; they are the attitude of environmental conservation in order to obtain and can consider direct and indirect effects through mediation.

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