

Does *Green Space* Influence Students' Academic Performance and Pro-environmental Behavior? An Empirical Study at a Pro-environmental University

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ABSTRACT

Research Article

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Green Space has become a central awareness of higher educational institutions as it is expected to create a better atmosphere to study. This study aimed to examine the effects of students' perception of Green Space on their Academic Performance and pro-environmental behavior. It was a quantitative study; there were 705 students in the population and 256 student participants. The data were collected by distributing the questionnaire. After the questionnaire was tested for validity and reliability, the data were analyzed with SPSS version 21. The results showed that students' perception of Green Space (X) had a positive but insignificant effect on Academic Performance (Y1). Furthermore, the Perception of Green Space (X) positively and significantly affected pro-environmental behavior (Y2). Therefore, it is recommended that higher education institutions improve their pro-environmental behavior by committing to Green Space. Then, educational institutions are concerned with other factors, such as the lecturers' competencies, interests, and passions, and the infrastructure to improve students' Academic Performance.

Keywords: Green Space; Academic Performance; Pro-Environmental Behavior;

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INTRODUCTION

Everyone loves a green and fresh environment. The beautiful earth, green leaves and trees, and beautiful colors of various flowers are pleasing to humans. Nevertheless, land, sea, and air damage happens as time passes. ICSU Scoping Group (International Council for Science, 2005), in its report, emphasized that human intervention in the environment makes nature worse. Changes in land increase the risk of landslides or floods. The destruction of mangroves can increase the vulnerability of coastal areas due to the inability to withstand waves, pollutant emissions, and greenhouse gases; as a result, using household appliances can increase the frequency of extreme weather events. Therefore, various parties began to campaign for the greening or environmentally conscious movement to improve the environment for humans in the future.

Institutions, especially educational institutions in Indonesia, are expected to be able to make their students aware of the importance of a green environment. Environmental education is part of Indonesia's mainstream education system and is integrated into school curricula and after-school activities (Nada, Fajarningsih, & Astirin, 2021; Noeswantari & Christanti, 2005). Several studies have examined the relationship between *Green Space* and student academic performance. Browning and Rigolon (2019) found that the effect of *Green Space* on Academic Performance was not consistent; from 13 articles, the results showed that 64% of articles had a positive and insignificant effect, 8% of articles had a negative and significant effect, and 28% articles have a significant and positive effect. Then, Kweon et al. (2017) found that schools with more trees had a higher percentage of proficient or advanced scores in Mathematics and Reading standardized tests. Students' perception of *Green Space* did significantly affect their achievement. Students in green schools are glad to study, and their positive mood improves their understanding when studying in the classroom. Furthermore, Beere and Kingham (2017) and Browning et al. (2018) also found a negative effect of *Green Space* on Academic Performance. These researchers found a significant negative relationship between greenness and test scores. It differs from the previous study; the test scores decrease when the environment is greener. It is supposed that students get too relaxed while studying. Related to the implementation of *Green Space*, various universities in Indonesia nowadays have begun developing various pro-environmental programs; moreover, green metric measurements will give a positive image if they reach the initial rank. This image will be beneficial for the university itself and the academics (Green Metric UI 2019).

Universitas Negeri Semarang (UNNES) is one of the universities implementing environmental pro-environmental. UNNES is an appropriate research object because the green environment is evenly distributed in all campus areas; pro-environmental courses are included in the university curriculum. Various greening programs involve all academics. It indicates that the UNNES is seriously implementing the vision of pro-environmental-oriented or pro-environmental programs. The previous inconsistent results encouraged the researchers to analyze whether the *Green Space* perceived by students can improve their Academic Performance. Furthermore, research on students' pro-environmental behavior has also been carried out by many researchers at UNNES. First, Rahmaningtyas et al. (2018) found that 89% of UNNES students have demonstrated pro-environmental behavior, and 11% still throw garbage carelessly and smoke in campus areas. Then, Rahmawati et al. (2020) found that simultaneously, the knowledge of

students (X1) and students' perception (X2) have significant effects on 66.5% of their attitudes on environmental pro-environmental (Y). Third, Naim et al. (2020) found that pro-environmental knowledge had a positive but insignificant effect on pro-environmental behavior for 10.3%, and environmental awareness had a positive and significant effect on 29.7% on pro-environmental behavior. UNNES, as a pro-environmental university, has implemented a pro-environmental program for students. The study results showed that most UNNES students have successfully displayed an environmentally friendly attitude.

This study aimed to compare the effect of students' perception of *Green Space* on their academic performance and the effect of students' perception of *Green Space* on their pro-environmental behavior.

Literature Review

Green Space

A *Green Space* is generally defined as a piece of open land accessible to the public and partially or wholly covered by grass, trees, or other plants (The United States Environmental Protection Agency, 2014). It is the one and only independent variable of this study. It has been reported that students know and feel well about the green atmosphere at the UNNES campus since they spend much time studying social interactions and other activities. What has yet to be reported is how students describe and can inform the researchers about what they perceive on *Green Space* at UNNES Campus.

The better the quality of the green environment comfortable humans feel. It is in line with the fact that learning outside the classroom with a green view can help understand and retain learning (Fägerstam & Blom, 2012). Classrooms with windows with green views can increase concentration and reduce stress and stress levels compared to classrooms without green views (Li & Sullivan, 2016). McGarigal (2012) mentions *Green Space* indicators, including (a) the total *Green Space* area related to the population and urban context, (b) the quality of *Green Space* based on the size, shape, and cover of vegetation, and (c) the spatial distribution and accessibility of *Green Space*. Verma et al. (2020) also mentioned that the indicators of *Green Space* included three categories of socioeconomic, demographic, and land use for microscale population groups.

Green Space is a variable that needs to be measured together with academic performance and pro-environmental behavior variables. Two variables, *Green Space* and pro-environmental behavior are measured using the indicator approach. We made statements for each indicator to be compiled into a questionnaire. The indicator approach is used to help measure the changes that occur, either directly or indirectly.

The questionnaire is the tool for data collection, and students, as the respondents, need to fill in the questionnaire about *Green Space*. Based on their perception, they need to describe and inform *Green Space* at UNNES Campus. Segal (1971) stated that perception is an experience that occurs in response to a physical stimulus.

The indicators of perception based on Walgito (2010) are:

1) Absorption of stimuli or objects from outside the individual

The five senses absorb or receive stimuli or objects. From the results of absorption or acceptance by the senses, the individual will get a picture, response, or impression in the brain. The image can be singular or plural, depending on the object of perception being observed. In the brain, images or impressions, both old and newly formed, are collected. Whether or not the picture is clear depends on whether or not the stimulus is apparent, the normality of the senses, and time, just or a long time ago.

2) Understanding

After the images or impressions occur in the brain, the images are organized, classified (classified), compared, and interpreted to form an understanding. The process of understanding is unique. The formed understanding also depends on the old images that the individual has previously recalled.

3) Assessment or evaluation

After an understanding is formed, the individual's understanding is assessed. Individuals compare the newly acquired understanding with the criteria or norms that the individual has subjectively. Individual judgments vary even though the object is the same. Therefore, perception is individual.

Academic Performance

The first dependent variable is Academic Performance (Y1). According to Suryabrata (2006), academic performance is an assessment of educational outcomes to determine how far the students' abilities are after learning and practicing. According to Bloom (Hipjillah & Badriyah, 2015), academic achievement is a process experienced by students to produce changes in knowledge, understanding, application, analytical power, synthesis, and evaluation. Narad and Abdullah (2016) defined Academic Performance as an educational goal achieved by a student, teacher, or institution during a specific period and measured by examinations or continuous assessment. The objectives may differ from one individual or institution to another.

Academic performance can be measured and observed in scores obtained by students in assessments such as class exercises, class exams, midterms, and end-of-semester exams (Yusuf et al., 2016). One tool to measure Academic Performance is Grade Point Average (GPA) (Center for Research and Development Academic Performance CRIRES, 2005). GPA is the average result of all grades. GPA is an accumulation of scores in different subjects obtained during the learning process; it is an ideal measure that reflects Academic Performance and determines the number of courses that will be taken for the next semester. One measure of the success of these students can be seen from the scores obtained.

Pro-environmental Behavior

The second dependent variable is Pro-Environmental Behavior (Y2). Lee (2011) believes that pro-environmental behavior is a practice that promotes resource protection and pro-

environmental practices and supports the sustainable use of the natural environment. Pro-environment is actioned by individuals or groups that promote or produce sustainable use of natural resources (Sivek & Hungerford, 1989/1990). Furthermore, Lee (2011) believes that pro-environment behavior is a practice that promotes the protection of resources and pro-environmental practices support the sustainable use of the natural environment.

Related to pro-environmental behavior, Mesmer-Magnus et al. (2012) defined that individual behavior contributes to environmental sustainability (such as limiting energy consumption, avoiding waste, recycling, and environmental activism). Pro-environmental behavior refers to general environmental behavior, such as initiatives to understand relevant information from ecological civilizations, participation in ecological civilization activities, turning off lights when not in use, and paying attention to waste classification.

Pro-environment behavior is closely related to the Goal Framing Theory developed by Lindenberg and Steg (2013), which bases the theory on human perceptions, thoughts, and decisions organized in a modular manner. This theory focuses on overall objectives, i.e., hedonic gain and normative goals. In connection with this research, the theory confirms that normative goals can improve pro-environmental behavior.

The indicators of pro-environmental behavior by Hardati et al. (2015) include (1) Pro-environmental behavior of biodiversity pillars, (2) Pro-environmental behavior of clean energy pillars, (3) Pro-environmental behavior of green architecture pillars and internal transportation, (4) Pro-environmental behavior of paperless policy pillars, (5) Pro-environmental behavior of waste management pillars, (6) Pro-environmental behavior of arts and cultural ethics pillars, (7) Pro-environmental behavior of pro-environmental cadres pillars.

Haryati et al.'s indicators are used since the indicators were already adopted and implemented at UNNES, the research location.

Hypotheses Development

The Effect of Perception of Green Space on Academic Performance

Hodson and Sander's (2017) research indicates a positive and significant relationship between *Green Space* and Academic Performance. The results explained that the presence of a green environment could support students' academic success. It fits with the research results by Browning and Rigolon (2019), which stated that there was a relationship between *Green Space* and academic performance. They found that *Green Space* can encourage academic performance. There is a positive and significant effect of 28%, measuring the type of *Green Space* and the distance of *Green Space* around the school. Better students' perception of *Green Space* will support the quality of learning and the achievement of higher learning outcomes.

Based on the explanation and previous studies, the first hypothesis was:

H1: Students' Perception of Green Space has a positive and significant effect on Academic Performance

The Effect of Perception of Green Space on Pro-environmental Behavior

In some studies, the perception variable predicts pro-environmental behavior (Gifford & Nilsson, 2014). The stronger the individual's perception, the higher his/her pro-environmental behavior will be. However, research shows that the direct relationship between perceptions, especially related to risk and pro-environmental behavior, is usually weak (Bubeck et al., 2012). Some studies have focused on how exposure to nature positively affects human well-being. Based on previous studies, the second hypothesis was:

H2: Students' Perception of Green Space has a positive and significant effect on Pro-environmental behavior.

Here is the research model of this study; see Figure 1.

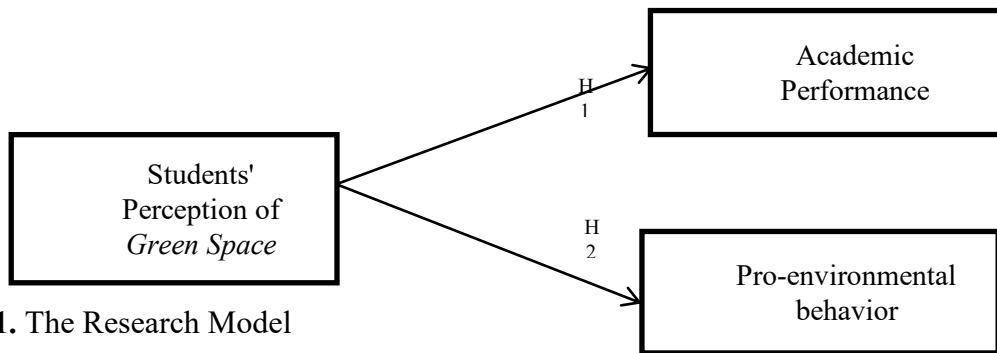


Figure 1. The Research Model

Methods

Population and Samples

The type of research used was quantitative research with a hypothesis-testing study design which aims to analyze, describe, and obtain empirical evidence of the influence pattern between variables (Wahyudin, 2015, p. 110). The data analysis method was carried out using SPSS Version 21. The total population in this study was 720 (all sixth and eighth semesters) students of the Economics Education, UNNES in 2022, and the researcher determined the error correlation range of 5%. Hence, the number of samples was 256 samples—the respondents filled in the questionnaires voluntarily and were glad to fill in since it was not tiring.

Research Instrument

Data were collected by distributing questionnaires. The questionnaire was made based on references processed by the researchers. It was distributed through *Google form* using a *Likert* scale (1 – 4 points in which 1-strongly disagree, 2-disagree, 3-agree, and 4-strongly agree) to measure the high or low conditions of indicators per research variable. We distributed the questionnaire in May 2022. The *Likert* scale was used because respondents were presented with various possible answers. *Likert* scales capture the level of agreement or their feelings regarding the topic more nuancedly. Respondents should know the situation and condition of the UNNES campus, so they should be senior students (6th and 8th-semester students). The data analysis method was carried out using SPSS Version 21. The definition and indicators of the research instrument can be seen in Table 1.

Table 1. Research Measurement

No.	Variables	The Operational Definition	Indicators/Measurement
1.	Perception of <i>Green Space</i>	<i>Green Space</i> is generally defined as open land accessible to the public and partially or wholly covered by grass, trees, or other plants (the United States Environmental Protection Agency, 2014). Perception is defined as an experience that occurs in response to a physical stimulus (Segal, 1971)	(1) Absorption of stimuli from outside the individual on <i>Green Space</i> (2) Understanding of <i>Green Space</i> (3) Assessment or evaluation of <i>Green Space</i> (Walgito, 2010)
2.	Academic Performance	Academic performance is defined as an assessment of educational outcomes to find out at the time of the evaluation how far the students' abilities are after learning and practicing. (Suryabrata, 2006)	Grade Point Average (GPA)
3.	Pro-environmental Behavior	Pro-environment behavior is a practice that promotes the protection of resources, and pro-environmental practices support the sustainable use of the natural environment. (Lee, 2011).	(1) pro-environmental behavior of biodiversity, (2) Pro-environmental behavior of clean energy, (3) Pro-environmental behavior of green architecture and internal transportation, (4) Pro-environmental behavior of paperless policy, (5) Pro-environmental behavior of waste management, (6) Pro-environmental behavior of arts and cultural ethics, (7) Pro-environmental behavior of pro-environmental cadres.

Source: The processed data, 2022

The dependent variables were students' academic performance and pro-environmental behavior, whereas the independent variable was Students' Perception of *Green Space*.

The validity and reliability were analyzed with SPSS Version 21. A statistic is valid if the significance level is smaller than the tolerance limit of 0.05 significance (Wahyudin, 2015). Based on SPSS calculation results, the significance value of each item was <0.05; all instruments' statements were valid. The reliability test is used to measure the consistency of a measuring instrument in measuring a concept or the consistency of respondents in answering question items in a questionnaire or research instrument; a questionnaire's statement is reliable if Cronbach's alpha values > 0.60 (Wahyudin, 2015). The counted Cronbach's Alpha was 0.812 for students' perception of *Green Space* and 0.751 for Pro-environmental Behavior. Based on these results, the statements were reliable. The validity and reliability of 2 (two) variables, pro-environmental behavior and perceptions of *Green Space*, can be seen in Table 2. The first dependent variable, academic performance, was not tested for validity and reliability since it is the manifest variable.

Table 2. Instrument’s Validity and Reliability

A. Pro-Environmental Behavior (Y2)				
No	Indicators	Statement	Validity	Reli.
1.		I like the green campus atmosphere	0.000	
2.	(1) pro-environmental behavior of biodiversity	I like to hear animal sounds, such as birds chirping, cats meowing, and others	0.000	
3.		I like the calm and healthy campus air	0.000	
4.		I am happy to see the flowers in the faculty yard	0.000	
5.	(2) Pro-environmental behavior of clean energy,	I turn off the lights in class when it is not in use	0.004	
6.		I like to use a fan instead of an AC	0.025	
7.		I like to take public transportation or walk	0.000	
8.		I will turn off the laptop when it is not in use or in hibernate state	0.000	
9.	(3) Pro-environmental behavior of green architecture and internal transportation,	I use a vehicle with complete components (helmets, mirrors, etc.)	0.000	
10.		I like to greet campus residents	0.000	
11.		I use my motorbike at an average speed on and off campus	0.000	
12.	(4) Pro-environmental behavior of paperless policy	I use enough water (as needed)	0.000	
13.		I reuse old paper for other purposes	0.000	
14.		I try to reduce the use of printed paper	0.000	
15.		I proofread carefully before printing the script	0.000	0.954
16.	(5) Pro-environmental behavior of waste management	I will only print scripts that are used	0.000	
17.		I throw garbage in its place (organic and inorganic)	0.000	
18.		I pick up trash that is around me (inorganic)	0.009	
19.		I try to bring my place or container when shopping	0.000	
20.	(6) Pro-environmental behavior of arts and cultural ethics,	I am happy to participate in environmental clean-up work	0.001	
21.		I like to buy domestic products (clothing and goods)	0.000	
22.		I enjoy watching traditional art performances such as <i>Wayang/ Traditional Javanese Puppets</i> .	0.033	
23.		I like wearing batik clothes	0.000	
24.	(7) Pro-environmental behavior of pro-environmental cadres.	I like to eat traditional food	0.000	
25.		I enjoy participating in social service activities in student organizations	0.000	
26.		I participate in unit conservation cadre activities	0.018	
27.		I enjoy attending seminars on conservation	0.000	
28.		I enjoy doing conservation skills training	0.000	
B Perceptions of Green Space				
No	Indicators	Statement	Validity	Reli.
1.	(1) Absorption of stimuli from outside the individual on <i>Green Space</i>	I feel happy because of the broad and large number of <i>Green Spaces</i> on the UNNES Campus	0.000	
2.		I know that the UNNES Campus has committed to providing <i>Green Space</i> .	0.000	
3.	(2) Understanding of <i>Green Space</i>	I understand that UNNES is committed to providing <i>Green Space</i> for its academic community.	0.000	
4.		I understand that <i>Green Space</i> is maintained on the UNNES Campus and is supported by its conservation policy	0.000	0.939
5.	(3) Assessment or evaluation of <i>Green Space</i>	I think UNNES is a green campus with excellent <i>Green Space</i> .	0.000	
6.		I consider that the <i>Green Space</i> on the UNNES Campus is more than sufficient because of the many parks and campus forests evenly distributed in the UNNES environment.	0.000	

After the data had been tested for validity and reliability, the data were analyzed with classic assumptions tests. Then, to test hypothesis 1 and hypothesis 2, a simple regression test with SPSS Version 2 was carried out. Regression analysis was performed to test the effect of X on Y1 and X on Y2.

RESULTS

The Effects of Students' Perception of Green Space on (X) on Students' Academic Performance (Y1)

The data from 256 students were tabulated and analyzed using a simple regression test, and the following is the regression output, as listed in Table 3.

Table 3. The Output of Linear Regression of X on Y1

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	88.160	3.859		22.845	.000
1 Perception of <i>Green Space</i>	.054	.101	.030	.533	.594

a. Dependent Variable: Academic Performance

The data above shows the independent and dependent variables' effects. In the Perception of *Green Space* (X₁) variable, the value of the t-count was 0.533, and the obtained sig-value was 0.594, which is more significant than 0.05. It means that the perception of *Green Space* positively affected academic performance, but it is insignificant. Here is the simple linear regression equation:

$$Y (AP) = 88.160 + 0.054 \text{ PGS} + e$$

From this equation, it can be interpreted that an increase follows one increase in the unit of perception on *Green Space* in Academic Performance for 0.054. It is a positive effect, and since the significance is more than 0.05, it is insignificant. Next, to find out the total percentage of the effect of X on Y1; then the R² test and the results are shown in Table 4.

Table 4. The Output of the R² Test

Model Summary				
Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.030 ^a	.001	-.002	7.68557

a. Predictors: (Constant), Perception of *Green Space*
 b. Dependent Variable: Academic Performance

The data above shows that the contribution of Perception to *Green Space* can be known from the value of R-Square; it is only 0.001. It means that the Perception of *Green Space* can affect the Academic Performance dependent variable with a minimal value; it was 0.1%, whereas; other factors outside the model affected 99.9% of students' achievement.

The Effects of Students' Perception of Green Space on (X) on Students' Pro-Environmental Behavior (Y2)

The data were from 256 students, tabulated and analyzed using a simple regression test, and the following is the regression output as listed in Table 5.

Table 5. The Output of Regression Analysis X on Y2

		Coefficients				
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	31.062	5.062		6.136	.000
1	Perception of <i>Green Space</i>	2.746	.133	.763	20.722	.000

a. Dependent Variable: Pro-environmental Behavior

The data above partially shows the effect of the independent on the dependent variable. In the Perception of *Green Space* (X_1) variable, the count value was 20.722, and sig. 0.000 was smaller than 0.05. It means a positive and significant effect on the Perception of *Green Space* on Pro-environmental Behavior. Here is the linear regression equation:

$$Y (PB) = 31.062 + 2.746 \text{ PGS} + e$$

From this equation, it can be interpreted that every increase in one unit of perception of *Green Space* is followed by an increase in Pro-environmental Behavior for 2.746. Next, to find out the percentage of the effect of X on Y1; then the R2 test and the results are shown in Table 6.

Table 6. The Output of R2 Test X on Y2

Model Summary				
Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.763 ^a	.582	.580	10.08174
a. Predictors: (Constant), Perception of <i>Green Space</i>				
b. Dependent Variable: Pro-environmental Behavior				

The data above shows the contribution of the Perception of *Green Space*; from the R-Square value of 0.582. It means that the Perception of *Green Space* can affect the dependent variable Pro-environmental Behavior, by 58.2%. Furthermore, 41.8% are affected by other factors outside the model.

DISCUSSION AND CONCLUSIONS

Students' perception of *Green Space* did insignificantly affect their achievement. It was different from our initial hypothesis, which stated that the perception of *Green Space* has a positive and significant effect. The campus is a fun place to study and can generate interest in student learning, but the effect is minimal and insignificant. Faculty of Economics (FE) UNNES has equipped the campus environment with various facilities to support students' learning. One of them is making a park around the campus area. The campus park can present a beautiful and relaxed campus environment so students feel comfortable and excited to study. Students can study, read books, and have discussions in the campus park. *Green Spaces* such as green fields, trees, and plants are expected to provide a level of comfort for students to carry out activities such as studying. The study, which shows that students' perception of *Green Space* did insignificantly affect their achievement, is not surprising because Beere and Kingham (2017) found a negative effect of *Green Space* on Academic Performance. It was consistent with the study results done by Browning (2018). He found only a significant negative relationship between greenness and test scores. However, the coefficients were near zero or less than a tenth percentage point. It is in line with Markevych et al. (2018), which found that there was not any relationship between *Green Space* and grades in Wesel's children (The population of Markevych et al.'s research). However, academic performance is more affected by other factors, such as internal motivation, lecturers, friends, and family factors on students' academic performance. Olufemi et al. (2018) also showed that academic performance is influenced by students' factors, parental background, and school factors. Then, Bertolini et al. (2012) stated that several factors impact Academic Performance, such as students' factors and their interactions with parents, teachers, and administrators. The larger systems are surrounding the student impact students' achievement, e.g., school districts, neighborhoods, local economy, political policy, and multicultural relations. Therefore, *Green Space* becomes an insignificant variable on Academic Performance despite its positive effect. The students, lecturers, peers, and parents are the variables that are supposed to have a significant effect. Here, pro-environmental behavior includes energy saving, less paper, waste utilization, and reforestation. Dense student learning activities and limited time to refresh their thoughts cause a higher risk of stress. The existence of *Green Spaces* around the campus can reduce stress and improve both physical and mental health. It also has an impact on students' pro-environmental behavior.

Furthermore, the perception of *Green Space* (X) positively and significantly affects pro-environmental behavior (Y2). It can be seen from the X coefficient was 2.746 with a sig value count was 0.000. It was consistent with the study result of Shamsuddin et al. (2012), which found that some relationships exist between the outdoor physical environment of the school and the student's social behavior. The design and planning of the school's external environment should give more consideration to creating a conducive learning environment that could foster positive social behavior. It is consistent with the second hypothesis that *Green Space* can improve student pro-environmental behavior. *Green Spaces* such as green fields, trees, and

plants can comfort students, thereby increasing their awareness of the importance of *Green Spaces*. Humans tend to like green and cool things and become an inspiration to do the same and be conservative regarding green and cool things. It is also related to a study by Whitburn et al. (2018), which reported that pro-environmental behaviors (PEBs) are associated with a personal relationship with nature. It was also consistent with the research by Zhang et al. (2019). They stated that outdoor education programs are promoted to enhance connections between individuals and nature to foster pro-environmental behavior. From these explanations, it can be concluded that: 1) Students' perception of *Green Space* (X) has a positive but insignificant effect on Academic Performance (Y1) for 0.1% with a coefficient was 0.05; on the other hand; and 2) Students' perception on *Green Space* (X) has a positive and significant effect on pro-environmental behavior (Y2) for 76.3% with the coefficient was 2.74.

Recommendations

Therefore, it is recommended that: 1) Educational institutions be concerned with *Green Space* and pay attention to other factors such as the needs and rights of students in the learning process, improvement of lecturer competence, and other factors for increasing academic performance achievement. Furthermore, 2) Students to improve their pro-environmental behavior by practicing those six indicators of pro-environmental behavior; i.e., (1) biodiversity, (2) clean energy, (3) green architecture and internal transportation, (4) paperless policy, (5) waste management, (6) arts and cultural ethics, and (7) behavior of pro-environmental cadres.

The Limitations of the Research

This research was only conducted at the Faculty of Economics, *Universitas Negeri Semarang (UNNES)*, one of the faculties with good pro-environmental commitments. It would undoubtedly be different if the research were carried out in different spaces. This study only uses indicators from variables adjusted to UNNES conditions. Research results may differ if other indicators are used.

DECLARATIONS

Authors Contributions: All authors contributed equally to the work.

Ethics: The research was conducted in accordance with the Universitas Negeri Semarang code of ethics.

Conflict of Interest: There is no conflict of interest between the authors and other parties during the planning, conducting, data collection, analysis and reporting of the study.

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