

The Effect of Environmental Personality And Locus of Control on Employee's Pro Environmental Behavior

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Abstract

The objective of this research is to find out whether environmental personality and locus of control of employee influences the employee's pro-environmental behavior linked with green city concepts. The method used in this study was an Ex Post Facto research with 2 x 2 factorial design with a random sampling of 32 employees from the Sanitation and Environmental Service office of Jakarta. Data was analyzed by applying two way ANOVA and Tukey test. The research results showed that 1) there were significant differences between pro-environmental behaviors linked with green city concepts between environmental personality who were the most accurate and those who were less accurate; 2) there were significant differences on employee's pro environmental behavior linked with green city concept with an internal locus of control and external locus of control; 3) for employee's with internal locus of control, pro-environmental behavior linked with green city concept were more positive with the most accurate environmental personality compared to less accurate environmental personality; 4) for employee's with external locus of control, pro-environmental behavior linked with green city concept were more positive with less accurate environmental personality compared to the most accurate environmental personality; 5) there was an influence of the interaction between environmental personality and locus of control on employee's pro-environmental behavior linked with green city concept. To improve the employee's pro-environmental behavior linked with green city concept, there was a need to consider the environmental personality and locus of control factors.

KEYWORDS: Environmental personality, locus of control, employee's pro-environmental behavior, green city concept

INTRODUCTION

Environmental management systems are best viewed as an organizing framework. They are monitored on an ongoing basis and reviewed periodically to provide effective direction for an organization's environmental management in the face of changes due to internal and external factors. All levels within the organization should accept responsibility for working towards environmental improvement as feasible.

According to Philip Kivel (1993: 9), the urban environment is correlated with urban spaces/city which, at that time, were only exclusive to gardens and city streets, in the late 1990s, when they became public and then raised many issues related to the urban environment. This situation cannot be separated from the infrastructure development of big cities in Indonesia, especially in DKI Jakarta, which tend to be more oriented to economic growth.

The Green City concept by Wildsmith (2009), also called a sustainable city or eco-city, is a city in which development is designed by considering the environment so that its functions and benefits can be sustainable. Similarly, Wildsmith (2009), and, Mori and Christodoulou (2011), define a green city as a sustainable city, where, in its development, it is based on equality between the current generation and future generations. So a green city, has a lot of meanings such as sustainable city, eco-city, and environmentally friendly city.

Various activities in the office use a lot of energy (electricity, water) and generate waste that has a negative impact on the environment. As an effort to prevent and minimize the impact of environmental degradation, there is a need to raise environmental awareness by realizing pro environmental behavior done by the employees. Pro environmental behavior is evidenced by environmentally-conscious actions such as, utilizing water and electric energy efficiently, using everyday public transportation that does not pollute the environment and other behaviors that contribute positively to the environment. (Blok, 2014: 8-9) This means that employees must have an attitude and environmentally friendly behavior in addition to be busily working.

Another study was conducted by Cameron Brick and Gary J Lewis (2014: 1-24), about *Unearthing the "Green" Personality: Core Traits Predict Environmentally Friendly Behavior*. The research results focused on three personalities namely *Openness, Conscientiousness and Extraversion*. The following relevant study was conducted by Deanne L Turnbull: A Loverlock (2010: 1-58) on *Employee Pro Environmental Behavior: A Workplace culture as a driver for social change*. The results of the study focused on pro-environmental behavior conducted in the workplace by employees affecting the company's behavior at home. Further research was conducted by Sonja Plasvic (2013: 1-46), on *An Investigation of Gender Differences in Pro Environmental Attitudes and Behaviors*. The results of this research suggests how differences in behavior of women and men to the environment. Based on some of previous research references, the novelty of this research was on employee's pro-environmental behavior about a green city that was influenced by environmental personality and locus of control.

According to Putrawan (2015: 327), in the framework of rational use of natural resources and ecosystems, human efforts are needed in order to conserve diversity and try to avoid damage by practicing environmentally and sustainably regulations, laws and policies. This will work effectively if it is done by a greening institution.

Preliminary observations at the Sanitary and Environmental Service office in DKI Jakarta, where there are still employees who do not have a caring behavior towards the environment, are linked with the concept of a green city. There are employees who still smoked in air-conditioned places, disposing of inadequate garbage, eating and drinking in the office, not paying full attention to the yard and office park, leaving trees un-watered, and the absence of a living tree in the corner of the office. In addition, the personality and locus of control of employees on the environment were still low.

Based on the above explanation, the researcher conducted research with the title "The influence of environmental personality and locus of control on employee's pro environmental behavior linked with green city concept".

RESEARCH METHODOLOGY

This research used a causal and effect method that was formed through the so-called ex-post facto 2x2 design. In this study, there was no manipulation of independent variables in the laboratory or settings in the field, but the subject had been exposed to the stimulus. The population in this study were the Sanitation and Environmental Service Office in DKI Jakarta employees amounting to 120 people. With a random sampling technique, the number of samples taken was 32 people in the year 2016.

The purpose of this research was to know the influence of environmental personality and locus of control on the behavior of the pro-environmental officer (pro-environmental behavior) linked with the green city concept in the Sanitation and Environmental Services office in DKI Jakarta. Taking into account the environmental accuracy most accurate and environmental personality less accurate and internal and external locus of control.

This study examined the interrelationship between research variables, as well as measured the influence of one variable with other variables. In this research, there were three variables studied, namely: behavior of pro-environmental employees (pro-environmental behavior) linked with the green city concept (Y). While the independent variables were (1) environmental personality (A), which consisted of environmental personality most accurate (A1) and environmental personality less accurate (A2); (2) locus of control consisting of internal locus of control (B1) and external locus of control (B2). (Uma Sekaran and Roger Bougie, 2010: 163) The research design described in Table 1 as follows:

**Table 1
Research Design**

		<i>Environmental Personality (A)</i>	
		<i>Most Accurate (A₁)</i>	<i>Less Accurate (A₂)</i>
<i>Locus of Control (B)</i>	Internal (B ₁)		
	External (B ₂)		

RESEARCH FINDINGS

The hypothesis was essentially a temporary answer to the problem of research based on the theoretical model, theoretical chart, theoretical framework, or at least based on generalizations or, if not found concepts as a solid basis, based on relevant research results (Putrawan 2017 : 21). Referring to two prerequisite tests it was known that to complete each hypothesis test, it used a two way ANOVA for the first, second and fifth hypotheses. The third and fourth hypothesis test proposed was a two-group test using the Tukey test. The test result of the influence on environmental personality and locus of control on the behavior of the pro- environmental employee linked with the green city

concept was found in the test results of the two groups and the interaction by using a two-way ANOVA test which can be seen in Table 2 as follows

Table 2
Recapitulation

Y	A ₁	A ₂	ΣB
B₁	n _(1.1) = 8	n _(2.2) = 8	n _(1.0) = 16
	ΣY _(1.1) = 838	ΣY _(2.2) = 641	ΣY _(1.0) = 1479
	$\bar{Y}_{(1.1)}$ = 104,75	$\bar{Y}_{(2.2)}$ = 80,13	$\bar{Y}_{(1.0)}$ = 92,44
	σ _(1.1) = 3.370	σ _(2.2) = 2.167	σ _(1.0) = 13.008
	σ _(1.1) ² = 11.357	σ _(2.2) ² = 4.696	σ _(1.0) ² = 169.196
	ΣY _(1.1) ² = 87860	ΣY _(2.2) ² = 51393	ΣY _(1.0) ² = 139.253
B₂	n _(2.1) = 8	n _(1.2) = 8	n _(2.0) = 16
	ΣY _(2.1) = 786	ΣY _(1.2) = 821	ΣY _(2.0) = 1607
	$\bar{Y}_{(2.1)}$ = 98,25	$\bar{Y}_{(1.2)}$ = 102,63	$\bar{Y}_{(2.0)}$ = 100,44
	σ _(2.1) = 4.683	σ _(1.2) = 4.926	σ _(2.0) = 5.164
	σ _(2.1) ² = 21.929	σ _(1.2) ² = 24.268	σ _(2.0) ² = 26.663
	Y _(2.1) ² = 77378	ΣY _(1.2) ² = 84425	ΣY _(2.0) ² = 161.803
ΣA	n _(0.1) = 16	n _(0.2) = 16	n _(0.0) = 32
	ΣY _(0.1) = 1624	ΣY _(0.2) = 1462	ΣY _(0.0) = 3086
	$\bar{Y}_{(0.1)}$ = 101,50	$\bar{Y}_{(0.2)}$ = 91,38	$\bar{Y}_{(0.0)}$ = 96,44
	σ _(0.1) = 5.177	σ _(0.2) = 12.187	σ _(0.0) = 10.549
	σ _(0.1) ² = 26.800	σ _(0.2) ² = 148.517	σ _(0.0) ² = 111.286
	Y _(0.1) ² = 165.238	ΣY _(0.2) ² = 135.818	ΣY _(0.0) ² = 301.056

Table 3
Two-Way ANOVA

Source of Variances	df	SS	MS	F _{cal}	F _{table}		
					.05	.01	.001
Between Group	3	3.013	1.004,3	64.4***	2,95	4,57	7,19
Within Group	28	437	15,6				
<i>Environmental Personality</i> (A)	1	820,3	820,3	52,6***	4,16	7,53	13,29
<i>Locus of Control</i> (B)	1	512,1	512,1	32,8***			
Interaction AXB	1	1.681	1.681	107.7***			
Total	31	3.450					

***P < .001

The first research finding based on the two-way ANOVA calculation, known that the value of Fcount was known = 52,6 > Ftable = 13,29 at α = 0,001. The conclusion was that there is a significant difference in the behavior of the pro- environmental employees

linked with the green city concept between those having the most accurate environmental personality and less accurate environmental personality.

The second research result based on the two-way ANOVA calculation, it was known that the value of $F_{count} = 32.8 > F_{table} = 13.29$ at $\alpha = 0.001$. The conclusion was that there were significant differences in the behavior of pro-environmental employees linked with the green city concept between those with an internal locus of control and external locus of control

The third research result, based on the calculation of the data score group A1B1 score of 104.75 and A2B1 mean score of 80.13; could be seen that there was a difference in the pro-environmental behavior score. Then after testing the level of significance difference using the Tukey test at $\alpha = 0.05$; note that the value of $Q_{count} = 24.94$ while the value of $Q_{table} = 4.05$. Conclusion: for employees with internal locus of control, the behavior of pro-environmental employees linked with the green city concept is more positive if it had the most accurate personality compared to less accurate personality.

The fourth research finding, the computation data of mean group score A1B2 was 98.25 and the mean score A2B2 was 102.63. It can be seen that there was a difference in the pro-environmental behavior score. Then, after testing the level of significance difference using the Tukey test at $\alpha = 0.05$; it was known that the Q value was 4.44 while the value of Q_{table} was 4.05. Conclusion: for employees with external locus of control, the behavior of pro-environmental employees toward the green city was more positive when having personality less accurate compared to the most accurate.

Result of the fifth research finding, two-way ANOVA calculation is known that the value of $F_{count} = 107.7 > F_{table} = 13.29$ at significance level $\alpha = 0.001$, Thus H_0 is rejected and H_1 accepted. Based on this matter, it can be concluded that the hypothesis proposed by the researcher can be accepted that there is interaction between environmental personality and locus of control to the behavior of pro environmental officer linked with green city concept.

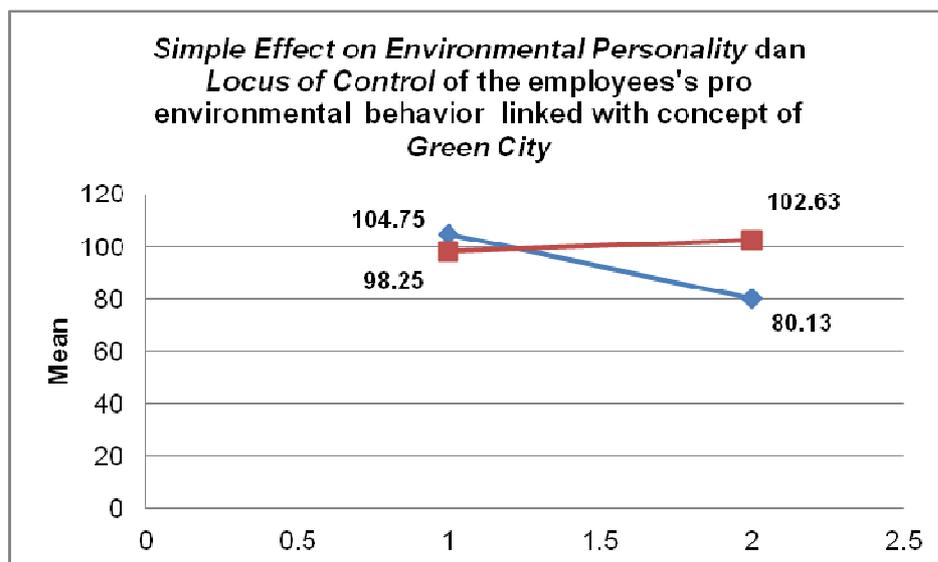


Fig 1. Simple Effect Graphic on the Interaction of environmental personality and locus of control on employees' pro-environmental behavior

DISCUSSION

1. Differences in the behavior of pro-environmental employees linked with the green city concept which had the most accurate environmental personality compared to the less accurate environmental personality

In an effort to prevent and minimize the impact of environmental degradation quality, environmental awareness needs to be raised by realizing pro environmental behavior that should be done by employees. Pro-environmental behavior is evidenced by environmentally-conscious actions such as, utilizing water and electric energy efficiently, using public transportation that does not pollute the environment and other behaviors that contribute positively to the environment. (Blok, 2014: 8-9)

The Big Five Personality represents the personality characteristics generally found in society. With The Big Five Personality, a person's personality can be seen based on his tendency to have greater personality traits on one dimension than the other four. (Robbins & Timothy, 2011: 172) The five personality dimensions are *conscientiousness, agreeableness, neuroticism, openness to experience, and extraversion*. (Colquitt, 2011: 9) Thus personality is predicted to have an effect on the positive behavior associated with the environment.

Based on the above explanation, there were differences on employees' pro-environmental behavior linked with the green city concept which had the most accurate environmental personality compared to less accurate environmental personality.

2. Differences in the behavior of pro-environmental employees about the green city concept with internal locus of control and external locus of control

According to Putrawan (2015: 327), in the framework of rational use of natural resources and ecosystems, human efforts are needed to conserve diversity and try to avoid damage by practicing environmentally and sustainable regulations, laws and policies. This will work effectively if it is done by a greening institution.

Locus of control is the tendency of a person to assess his or her success or failure in protecting himself against the adverse effects of the work environment on the basis of his own ability or external factors. The concept of locus of control was first proposed by Rotter (1966: 7), a Social Learning Theory specialist. *Locus of control* is one of the personality variables that is defined as an individual's belief in the ability to control his own destiny. Individuals who have confidence that the fate or events of his life are under his control are said to be individuals who have an internal locus of control. Meanwhile, the individual who has the belief that the environment has control over the fate or events occurring in his life is said to be an individual possessing an external locus of control. Based on the above explanation, there were differences in employees' pro-environmental behavior linked with the green city concept who had internal and external locus of control.

3. For employees with internal locus of control, the employees' pro-environmental behavior linked with the green city concept was more positive if environmental personality was most accurate

In this study in measuring pro-environmental behavior, the researchers modified the measuring tool *General Ecological Behavior Scale (GEBS)*. Initially GEBS had 38 items and 7 sub-scales: *Pro-social behavior; Ecological garbage removal; Water and power conservation; Ecologically aware consumer behavior; Garbage inhibition; Volunteering in nature protection activities; And ecological automobile*. In the development of GEBS revised in 2004, Kaiser and Wilson (1998: 420) developed this scale including 6 types of behaviors: *energy conservation, mobility and transportation, waste avoidance, consumerism, recycling, and vicarious, social behaviors toward conservation*.

Locus of control is how the individual feels / sees the line / relationship between his behavior and the consequences, whether he can accept responsibility or not for his actions. Locus of control has external and internal dimensions. An external dimension would assume that the responsibility of all action is outside the offender. While the internal dimension sees that the responsibility of all actions is in the self of the perpetrator.

Individuals who have an internal locus of control are identified to rely more on their own expectations and also favor skills more than just favorable situations. Thus it can be seen that individuals who have internal locus of control, ability and business factors are dominant. Therefore, if an individual with an internal locus of control experiences failure, then he will blame himself for lack of effort. The same happened with success, feeling proud of the results of his own efforts. This will have an effect in future action, i.e., if they are sure to achieve success, they will strive with all of their capabilities.

Based on the above explanation, employees' pro-environmental behavior linked with the green city concept was more positive for employees with internal locus of control, if environmental personality was most accurate.

4. For employees of external locus of control, the employees' pro-environmental behavior linked with the green city concept was more positive if environmental personality was less accurate

Luthan (2008: 120) says, *personality will mean how people affect others and how to understand and view themselves, as well as their inner and other measurable traits and person - situation interaction*. Therefore, personality is shaped by interaction with the environment so as to create uniqueness among each person, how people influence others, how they understand and see themselves, and how their inner and outer character traits measure the inner and outer traits and Interaction between humans. In other words, personality is a characteristic of a person formed from responses and reactions to others in his environment, shown by how a person thinks, feels, and behaves, according to the characteristics of his underlying dimensions.

Kreitner and Kinichi (2001: 203) reported that the results achieved by internal locus of control are derived from his own activities. While in individuals with external locus of control assume that the success achieved is controlled by the circumstances surrounding it. Individuals who have external locus of control will view the world as unpredictable. Likewise in achieving goals, individual behavior will not have a role in it.

Individuals who have external locus of control see success and failure from difficulty and fate. Therefore, if they experience failure, they tend to blame the surrounding environment that causes it. It certainly affects the action in the future, they feel inadequate and lacking in their efforts so that they have no hope of fixing the failure. Individuals, who have external locus of control are identified to be more reliable on their expectations to depend on others and tend to seek and choose favorable situations.

Based on the above explanation, employees' pro-environmental behavior linked with the green city concept were more positive for employees with external locus of control, if environmental personality was less accurate.

5. Interaction effect of environmental personality and locus of control on employees' pro-environmental behavior

In shaping pro environmental behavior, according to research conducted by Gifford and Nilsson (2014: 143-146), there are several factors that influence it. Here are some factors that influence pro environmental behavior: 1) *Personality, The Big-Five personality* is currently considered to represent many normal personality domains including *openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism*. 2) *Sense of control*, when someone who believes events or lives as a result of their own control or personal characteristics that have an internal locus of control, they actively seek information, including on environmental issues. Locus of control has been linked to a greater desire to purchase pro-environment products and a strong intention to pro-environmental behavior. Locus of control also connects the values of outlook and pro environmental behavior.

The pro-environmental behavioral model developed by Hines et al., is influenced by various variables. Pro-environmental behavior is related to several variables: (1) personality factors (attitude, locus of control, personal responsibility); (2) awareness; (3) knowledge of strategic actions; (4) acting skills; (5) the intention to act; and (6) situational factors. (Engdasew, 2010: 23) Hines, Hungerford, and Tomera (1986) conducted a meta-analysis of research attempting to apply a planned behavioral framework theory to predict pro-environmental behavior. The Goal was to determine the variables (cognitive, psychosocial, and demographic) strongly related to pro-environmental behavior and the relative strength of the variables to each other. They found that variables such as (in the order of co-relational forces), intentions, locus of control, attitudes, personal responsibilities, and knowledge, were significantly co-related with pro-environment behavior.

Caring becomes part of the internal motivation to take action. Environmental concerns that become a person's behavior are also influenced by socio-economic conditions, value systems, special beliefs, and intention to behave. Based on the above explanation, there was an interaction effect of environmental personality and locus of control on employees' pro-environmental behavior linked with the green city concept..

CONCLUSION

The conclusion that can be obtained from this research was: employees pro-environmental behavior linked with the green city concept was more positive for

employees with internal locus of control, if environmental personality was most accurate. Vice-versa, employees' pro-environmental behavior linked with the green city concept was more positive for employees with external locus of control, if environmental personality was less accurate. Therefore, employees' pro-environmental behavior linked with the green city concept was not only influenced by environmental personality, but also was influenced by locus of control, whether internal or external.

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