

The Importance of Pro-Environmental Behavior in Adolescent

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Abstract. Studies regarding pro-environmental behavior in adolescents are lacking. This study aimed to examine the importance of pro-environmental behavior in adolescents (high school and university students) by conducting literature review from previous studies on pro environmental behavior. Pro-environmental behavior is the behavior of individuals that contributes towards environmental preservation. Based on previous studies, measurement of pro-environmental behavior were investigated on several theories, namely theory of planned behavior (TPB) and value, belief, norms (VBN) by using aspects of pro environmental behavior. Young people with critical thinking, and good environmental education, are expected to behave more environmentally friendly for creating a sustainable future.

1 Introduction

The environment is one of the most important component for mankind. Interactions between humans and environment that occur continuously, will affect human behavior on the environment. Human attitudes and behavior will determine the good condition of an environment. The way humans treat their environment will have an impact on the quality of human life itself [1]. Lack of human behavior that cares about the environment, causing global environmental damage. It encourages people today to change their behavior in an effort to reduce the harmful effects of environmental damage [2]. Environmental protection and recovery are the main challenges facing our society today, therefore it is important to know and understand pro-environmental behavior in society, and what factors influence it [3].

In this case, the adolescent is part of the community, which has the potential for environmental protection [4]. Attitudes, knowledge, behaviors, concerns that the adolescent have about the environment either directly or indirectly influence future decision-making about natural resources and how their use can be sustainable [5]. Therefore, the adolescent need to be motivate, in order becomes a pioneer for pro-environmental behavior, hence in that aged the challenges and modification toward environment more easily achieved [6].

Scholars have various terms to describe behaviors that protect environment, such as; environmentally responsible behavior, environmentally concerns behavior, eco-friendly behavior, and pro-environmental behavior [7]. Pro-environmental behavior is a behavior that harms the environment as little as possible but provides enormous benefits to the environment [8]. Based on Kaiser [9], pro-environmental behavior has six (6) indicators; (1) energy conservation, (2) mobility and

transportation, (3) waste avoidance, (4) recycling, (5) consumerism, and (6) vicarious behaviors toward conservation. These six indicators can be used to measure the pro environmental behavior of each individual. These six indicators can be used to explain pro environmental behavior through a widely used theory, the theory of planned behavior (TPB). Based on TPB, there are several variables used to explain pro-environmental behavior, ie attitude toward behavior, subjective norm, perception of behavioral control, and intention [10].

In order to improve pro-environmental behavior in the adolescent, the government has intervened in environmental education through “Adiwiyata Program” [11]. It was accordance revealed by Pooley & Connor [12] and Chankrajang and Muttarak [13] that education is the most effective ways to solve environmental problems. Environmental education is considered important to increase individual knowledge, positive attitude, and eco-friendly behavior. Based on this exposure, it becomes important to know the importance of pro-environmental behavior in adolescent.

2 Method

In this paper a descriptive method is used to know the importance of pro-environmental behavior in adolescent based on literature and previous studies.

3 Results and discussions

The adolescent will be affected by environmental problems starting from current actions, so they must propose with precise environmental knowledge and skills to evolve sustainable solution [14]. Pro-

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environmental behavior is solution that related to environmental problems [15].

Larson has been described actions that include behavior related to pro-environmental behavior through several terms, namely:

- a. Ecological behavior by Kaiser , 1998
- b. Environmentally responsible behaviors by De young, 2000
- c. Environmentally significant behaviors by Stern, 2000
- d. Responsible environmental behaviors by Cottrel, 2003
- e. Pro-Environmental behaviors by Bamberg, 2007
- f. Conservation behaviors by Huddart-Kennedy, 2009

Pro-environmental behavior was seen as a combination of self-interest and concern for others, subsequent generations, other living beings or the whole ecosystem [16].

Given the gap between attitudes, conservative psychologists have ceased to believe that attitudes can be traced from the record of human behavior. In contrast to this conventional understanding, Kaiser et al developed a behavior-based behavioral tool for youth. Technically, behavior measurement results based on attitudes toward the environment represent such a result of measuring human attitudes directed at conservation behavior [9].

3.1. The effect factor of pro-environmental behavior

There are several factors that affect a person, be it positive or negative in pro-environmental behavior, among others; demographic factors (gender and years of education), external factors (institutional, social, economic and cultural); and internal factors (motivation, environmental knowledge, awareness, values, attitudes, emotions, locus of control, responsibility and priority) [17]. According to Abedi Sarvestani and Shahvali (2009) in [18], human behavior (including pro-environment) influenced by beliefs, one's values and attitudes. Personal values are key to shaping attitudes towards the environment but not always followed by a pro-environmental behavior. Situational factors beyond the control of the poses in pro-environmental behavior. So, we need an intervention strategy that aims to support and removal of barriers to pro-environmental behavior [19].

3.2. Theory of pro-Environmental behavior

The existence of different types of factors that influence pro-environmental behavior encourages a variety of studies that generate a variety of theories to explain or predict which variables are significantly involved. The theory used, ie norm activation model (NAM), theory of planned behavior (TPB), Value-Beliefs-Norm (VBN) theory.

NAM describes that there were 3 variables that affected the process of the occurrence of a behavior. The three variables include personal norms, awareness of consequence and ascription of responsibility

(responsibility for negative consequences if not prosocial).

One of the related theories is Ajzen's theory of planned behavior (TPB) which explains that there are three antecedent variables, namely (1) attitudes toward behavior, (2) subjective norms and (3) perceived behavior control [20]. The three antecedent variables that have been mentioned affect the formation of an intention of individual behavior in this case is pro-environmental behavior.

The value-belief-norms theory described there were several variables used to predict pro-environmental behavior, including social value orientation and pro-environmental activities; orientation value (individual and altruistic); orientation hedonist, consumer behavior (the behavior of individuals and the public) developed by [21]

Some previous studies on pro-environmental behavior, explained through TPB ie; Boldero, [22] states that the intention to recycle newspapers can be predicted directly from these recycling activities and attitudes toward recycling activities predict the intention of recycling; ; Tonglet et al. [23] suggests that attitudes can predict behavior, so attitudes show an important role in behavior. Davis et al. [24] in his research states that there is a relationship between attitudes, subjective norms of behavior. Another study on predicting pro-environment behavior Sparks and Shepherd [25], suggests that the attitude of subjective norms, and control of "Green consumerism" have a significant relationship in the intention of individuals in consuming green vegetables. Positive attitudes toward the environment can directly affect pro environmental behavior at a low cost, such as recycling. (Diekman in [17].The attitudes derived from life experience and education, markedly influence behavior [26].

Leeuw et al. [27] revealed that TPB model (attitude, subjective norms, and perceived behavioral control) made independent contribution to predict intention. The intention was predicted behavior. Behavioral, normative, and control beliefs predicted, respectively, attitudes, subjective norms, and perceived behavioral control. Empathic concern influenced intentions and behavior indirectly by its effects on behavioral, normative, and control beliefs. Based on the data, showed that high school students have a positive intention toward pro-environmental behavior but failed in action. High school students as a young people is an important population because the initial formation of pro-environmental behavior occurred because of the habit of applying environmentally freindly behavior. Examination of the effects of specific beliefs revealed important implications for designing effective behavior-change intervention.

3.3. Pro-environmental behavior in adolescent

Based on Li and Liu [28], the influence of intergenerational on the behavior of pro-environment teenager in "chines families", divided into 2 social type (influence and normative information), it was found that

pro-environmental behavior in adolescents has a positive relationship between influence and normative information in the "Chinese families". Furthermore, when it was tested with variable "parental power" There are two main effects in different directions, namely the relationship between the influence of information and behavior of pro-environment in adolescents become stronger when adolescents feel the influence of parents is higher, by contrast with the normative influence.

Social influence for healthy eating in adolescents can be associated with a family member, television programs, and teacher. The government's policy to promote healthy foods do not contribute to the build subjective norms among adolescents Denmark. Young women who have a high weight of time, have the intention to eat healthy foods. Subjective norms have contributed to predict the intentions of a person to eat healthy foods. Therefore, young people in Denmark do not have a strong motivation to comply with their social norms [29].

Environmental education and pro-environmental behavior are difficult to measure reliably. Aspects that affect the behavior of school students and students are very spacious and the interrelationship of these aspects are very complex. It becomes difficult to separate the effects of the environmental education of other factors, such as the role of age in personal responsibility, the impact of various resources, customs, and norms. The survey conducted on university students and high school mainly focused on knowledge, attitudes and behavior patterns and have analyzed its relationship rather than causality. The impact of environmental education has not been measured directly in the study and identified a clear delineation between research focuses on patterns of behavior and interrelated policy document that will add to the challenges and strategies for environmental education. The main implication of this study for environmental education is that educators should be aware of the diversity of the commitment and interest of the students high level of environmental and sustainability issues when designing the curriculum. Environmental education is now likely to make a mistake with a focus on students who are less committed to the environment than students who are strongly committed to raising environmental awareness. Therefore, environmental education is expected to overcome differences in knowledge, attitudes, and behavior of students in a differentiated, targeted and effective way in the future [30].

Szagun and Pavlov [31], showed that adolescent in both countries (German and Russia) have an emotional attitude towards environmental issues and expressed willingness to engage in pro-environmental behavior, both personally and politically. Consistency in the relationship between feelings and behavior of the environment so that indifference to environmental issues associated with the lack of willingness to engage in pro-environmental behavior. Influence of gender on the environment in adolescents more obvious difference compared with culture. Pro-environmental behavior can be seen as pro-social behavior, which included a caring attitude towards nature.

Bell et al [32] showed that young people are an important population to get the energy-saving intervention for adolescent consumers of energy in the future. The intervention is done with the intention to develop the implementation of behavior change and psychological techniques are widely used. Adolescents who are already actively involved in energy saving, identified resulting in changes in behavior.

Behavioral intention have significantly affected by awareness of the consequences, attitudes toward environment, public transportation, a moral obligation to change, and easy or difficult behavior, environmentally friendly way. This will trigger a younger people to protect the environment to be sustainable. Motivation and campaigns should be routinely performed to increase awareness and understanding of students about the consequences of transportation and environmental issues [33]. However, environmental behavioral intention in disaster event is very limited. For example how intention behaviour concerning to debris cleanup, what factor have been influence [34].

Gronhoj and Thogersen [35], states that pro-environmental of behavior in adolescents are highly influenced by the norms that dominate in the family and how it is manifested in the behavior of their parents.

Based on the above, pro-environmental behaviors among adolescents may be formed from a variety of factors, both internal and external. These factors become unity will manifest in a person's actions. Involvement of young people in environmental activities will foster positive feelings that will make a positive feeling that the realization of a sustainable pro-environmental behavior and will contribute both to the environment in the future.

5 Conclusions

Pro-environmental behavior is a individual effort to reduce the negative impact due to the destruction of nature by improving and preserving the environment. Pro-environmental behavior becomes very important, especially among adolescents. That is because adolescents are the future assets of the nation that will be the policy makers about the environment so that sustainable. Adolescence is a good representative for the change of behavior especially pro-environmental behavior.

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