

# How Does Student's Engagement Build Consumer Green Behavior?

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**Abstract**—This research is based on the high environmental damage because of environmentally unfriendly behaviour. So that it needs serious and crucial effort to solve these problems, especially through learning. The purpose of this study is to know how the quality of student engagement in learning contributes to the development of consumer green behaviour. This research conducted the survey to 554 students of Adiwiyata Junior High School in Bandung. The data were collected by observation, interview, and questionnaire. Through SEM PLS analysis obtained the result that consumer green behaviour can be built from the student engagement on learning.

**Keywords**—engagement; consumer; green behavior; student

## I. INTRODUCTION

The quality of learning that is good measured by the quality of engagement in consumer learning that is environmentally friendly or green consumer describes the condition of consumers who care about the environment, consumer products that are environmentally friendly, and are able to manage waste so as not to have a negative impact on the environment. Thus, there are two green consumer objectives, namely meeting their needs while reducing the impact of environmental damage. In addition, a green consumer in this sense is characterized by an active attitude in consuming green products.

The environmentally friendly behaviour of students can be built through learning, which is expected by teachers and students to develop their ecological intelligence. The ecological intelligence that is built through this learning is called an eco-pedagogy. "Eco-pedagogy can be interpreted as an academic movement to make students aware of being an individual who has life understanding, awareness, and skills in harmony with the interests of nature conservation [1]." which can be used to empower students. Consumer Green Behaviour is built through learning because school graduates will act as 1) agent of change in the community, namely agents in developing the behaviour of people who have knowledge, insight, attitudes, and behaviours that uphold sustainability or sustainability. 2) Agents who are aware of the limitations of natural resources and the existence of global warming issues and 3) agents who can apply ecological intelligence or learning applications that are eco-pedagogical in everyday life [1].

One effort to achieve the goal of efficient learning is to improve the quality of engagement in learning. The quality of student engagement can improve meaningful learning [2]. According to Astin, "Meaningful student involves the process of engaging students in every facet of the educational process for strengthening their commitment to education, community, and democracy [2]." The engagement of students which is meaningful can foster a positive attitude of students [3-7]. The quality of engagement in learning is manifested in three ways: cognitive engagement, emotional engagement and behavioural engagement. Based on this, there is a close conceptual relationship between engagement and engagement.

The attachment of students is the time allocated by students to educational activities that contribute to the desired results and in accordance with the expected quality. In this case, the attachment of students focuses on quantity, which is the time allocated for educational activities. The engagement of students in learning influences attitudes through knowledge possessed [8-10]. In addition, student engagement can influence behaviour which states that the engagement of students will build behaviour if there are needs, linkages and support [11,12]. In this case, engagement with teachers, parents, and friends is a factor that influences behaviour [11], and teacher and student interactions both directly and indirectly can predict behaviour [13]. Engagement in learning will build behaviour because engagement in learning is a social development process which increases active participation and encourages students to act. Based on this, this study aims to explain how the engagement of students can improve the behaviour of green consumer behaviour.

## II. METHOD

This research was conducted through a survey of students in Adiwiyata Public Middle School in Bandung as many as 554 students. Data collection is done through interviews and distributing questionnaires to students. The research instrument consisted of non-test instruments. Non-test instruments in the form of questionnaires with Likert scale. The data obtained are then processed using descriptive statistics and processing of verification data carried out by PLS-SEM because this research aims to develop theory and not have multi-collinearity problems. Before testing the hypothesis, it has been ascertained

that the indicators used can measure latent constructs through 2nd order confirmatory.

**III. RESULTS**

The results of this study consist of descriptive and inferential results. Descriptively describe the quality of engagement in learning and environmentally friendly consumer behaviour. Inferential results describe the results of testing hypotheses that answer the research question about the influence of the quality of engagement in learning on green behaviour consumers. The engagement of students is relatively high in a row of behavioural, cognitive and emotional engagement. Behavioural engagement is shown by activeness in practicum and experiment. Cognitive engagement includes emotional engagement shown with enthusiasm, and joyful feelings when taking lessons. The results of the study regarding the engagement of students and green behaviour consumers are as follows:

**TABLE I. RESEARCH RESULTS OF STUDENT ENGAGEMENT AND CONSUMER GREEN BEHAVIOR**

Variable	Dimensions	Score	Criteria
Consumer Green Behavior	Buying behavior	1495	Middle
	Usage behavior	1590	High
	Management behavior	1314	Middle
Engagement	Cognitive	1401	Middle
	Emotion	1225	Low
	Behavior	1415	Midde

Source: Primary Research 2017

Based on the results of the study, students' green behaviour is dominated by the ability to save behaviour in the use of fuel and energy, while the quality of student engagement is dominated by behavioural engagement. Here, students' behavioural attachments that are influential on environmentally friendly usage behaviour, this shows that behavioural attachments such as following experiments or practicum affect the ability to save energy. Whereas weak emotional involvement has an impact on weak management behaviour, this means that management behaviour requires pleasure, awareness, and love for the environment.

Inferentially, the influence of the quality of student engagement in learning of green behaviour consumers by testing the following hypothesis:

Ho:  $\rho_0 = 0$ : the quality of engagement in learning does not affect green consumer behaviour.

H1:  $\rho_1 \neq 0$ : the quality of engagement in learning affects green consumer behaviour.

The path coefficient is 0.204 and the coefficient of determination is 0.0416 p-value is 0.00 and t hits (4.463) > ttab, 1.97.

Based on the results of testing, Ho is rejected, thus concluded that there is an influence of the quality of engagement in learning on green behaviour consumers

These results are consistent with the research of Wongwanich [11], Skinner and Michael Belmont [12] and

Ringwalt [13] which state that there is a relationship between student engagement and student achievement as indicated by behavioural changes. In this study, 26.7% of students' environmentally friendly behaviour is influenced by the quality of engagement in learning. The magnitude of this coefficient is included in the high category in the standard measure of the coefficient of determination in behavioural research.

**IV. DISCUSSION**

The quality of student engagement in learning consists of the dimensions of cognitive engagement, emotional engagement, and behavioural engagement. Whereas consumer green behaviour consists of dimensions of buying behaviour, usage behaviour and waste management behaviour. The quality of cognitive engagement is indicated by the completeness of the task, noting important matters relating to environmental issues. Everything that is received from further learning affects the behaviour of everyday life. Emotional engagement is shown with enthusiasm, joy, and interest when taking social studies lessons. Behavioural engagement is shown by active engagement in experiments, engagement in experiments provides practical examples that are relatively easy to imitate students. The quality of engagement in learning is shown by the intensity of engaging in relatively high, enthusiastic discussions and making good observations of examples of behaviour. While green behaviour consumers are mainly indicated by buying behaviour, especially the intensity of observing the recycling code in plastic packaging; Usage behaviour is indicated by a relatively high intensity in conserving electricity and waste management behaviour as indicated by the behaviour of disposing of garbage in its place. In this case, the quality of engagement in the form of relatively high intensity in discussion and observation is able to mobilize students to behave environmentally. This is possible if the discussions that occur in schools are able to give meaning to students so that students can immediately practice the behaviour. In this study, the quality of engagement in learning has a significant effect on green behaviour consumers. Thus, the teacher's efforts are needed to improve consumer green behaviour through learning. Green behaviour consumers in learning are strived both in the scope of the school and the scope of learning in the classroom. In the scope of green behaviour, consumer schooling is enhanced by academic culture, curriculum, infrastructure, and staff. Whereas in the classroom, this green behaviour consumer is enhanced through teacher competencies, learning methods, learning techniques, media, and teaching materials summarized in a learning design. Learning design consists of six components, namely learning, learning objectives (general and special), learning analysis, learning strategies, teaching materials and learning assessment. Before designing / designing learning, it is necessary to pay attention to the competence of the teacher, who will design the design. Teacher competency consists of pedagogic competencies, personality competencies, social competencies and professional competencies. From pedagogic competence, teachers must be able to understand the differences in students' backgrounds in environmentally friendly behaviour and different levels of knowledge of environmentally friendly behaviour. In personality competence, the teacher has a friendly, pleasant, intimate, accommodating personality and is

not tense when interacting in class. Teacher's social competence can be seen in the ability to socialize with peers, parents of students and outside parties related to school, professional competence is the skill of planning, implementing and evaluating learning and managing classes so as to create a pleasant learning atmosphere, high student participation, not rigid but still oriented towards learning material.

The first component in learning design is students. The use of learning design components such as methods, instructional media, and evaluation tools, must refer to the characteristics of students including age, gender, academic ability, socioeconomic background, and different conditions learners. The second component is the learning objectives consisting of general instructional goals (TIU) and specific instructional goals (ICT). In formulating goals using operational verbs for the purpose of increasing cognitive, emotional and behavioural engagement. The third component is the analysis of learning or material. Learning material contains learning materials consisting of material knowledge of events, facts, and concepts about consumer's environmentally friendly behaviour. The fourth component is the learning method. Examples of learning methods chosen to improve the quality of engagement in learning, participation in learning and activeness of students are cooperative learning [14,15]; inquiry; Problem Based Instructions. Characteristics of teaching materials that are able to increase student engagement are adaptive, meaning that they contain the latest development issues, technological developments; self-instructional or material-based, self-training and assessment; and self-contained or contains all material and theories. Evaluation characteristics to measure the quality of engagement in social studies learning in the form of cognitive, affective and behavioural engagement are observations and questionnaires that assess students' responses to learning.

## V. CONCLUSION

Base on this research, students' green behaviour is dominated by the ability to save behaviour in the use of fuel and energy, while the quality of student engagement is dominated by behavioural engagement. Students' behavioural engagement effects on environmentally friendly usage behaviour, this shows that behavioural attachments such as following experiments or practicum affect the ability to save energy. Whereas weak emotional involvement has an impact on weak management behaviour, this means that management behaviour requires pleasure, awareness, and love for the environment. Consumer green behaviour can be improved through learning specifically by increasing the quality of student engagement in learning. The quality of students' engagement in learning can improve consumer green behaviour as evidenced by the significant influence of the quality of involvement in learning on green consumer behaviour. In the context of learning, increasing green behaviour of consumers is designed in advance by developing learning designs that can increase involvement in learning.

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