

Ecolabel in Environmental Education

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Abstract—Environmental deterioration has created an urgent need to promote environmental education. In order to support environmental improvement and build a society that cares for environmental safety, hence ecolabel research is designed in environmental education in DKI Jakarta. This study aims to determine: (1) to know ecolabel indicators and environmental education, (2) to find out the relationship between ecolabel and environmental education. This research will be carried out with a quantitative descriptive method. The urgency of this study

is to discuss ecolabel indicators and environmental education and to find out the relationship amongst them. The result of this study will be useful as a reference for the community as consumers to be able to obtain accurate information about the environmental aspects of a product, so they can be selective in choosing green product whose life cycle has a smaller negative impact for the sake of environmental sustainability.

Keywords—Ecolabel, Environmental Education

I. INTRODUCTION

Globalization and modernization have given birth to perspectives that encourage us to think more objectively, logically, and challenge views from an economic, socio-cultural, environmental, political and security standpoint. The declining quality of the environment brings people to a certain environment on the environment by promoting the movement of green consumers (green consumers), which helps to increase the wider community to start producing environmentally friendly products.

The community uses a variety of products to meet their sustainability needs. The need is getting higher, both quality and excellence, which will increase directly and indirectly to environmental sustainability. Various methods are used to overcome environmental damage,

which is not only by making efforts that encourage technical, also approved by efforts that increase educative, informative, and persuasive, such as ecolabeling in sustainable development, so that people can find a variety of products that are supported environmentally friendly and does not damage nature, while the process of taking raw materials is sustainable and does not produce waste that is harmful to the environment. Application of ecolabeling to products that are commonly consumed for the needs of the world, specifically the industrial world for economic sustainability. Sustainable economic sustainability is also accompanied by social and environmental sustainability. Ecolabeling is also one of the proactive voluntary environmental management tools and is expected to be an effective tool to protect the environment, community interests and increase

production efficiency and competitiveness. In addition, ecolabeling also supports the creation of synergies to control negative environments and provides and requests environmentally friendly products and services.

Society as consumers use various products. Various methods are used to overcome environmental damage, approved educational, informative and persuasive protection, such as: ecolabeling in environmental education, so that people understand accurately the various types of products purchased that are environmentally friendly and do not damage nature, when the process of purchasing sustainable raw materials also does not produce waste which is dangerous for the environment. In order to realize Indonesian people who have the knowledge, awareness, and skills to facilitate actively in preserving and improving the quality of the environment, research on ecolabeling in environmental education is conducted.

Community members as consumers use various products. Various methods are used to overcome environmental damage, including education, information, and persuasion, such as: ecolabel in environmental education so that the community know accurately the various types of purchased product that are environmentally friendly and do not damage the nature, where the process of taking raw materials is sustainable and does not produce waste that is harmful to the environment. In order to realize Indonesian people who have the knowledge, awareness and skills to play an active role in preserving and improving the quality of the environment, the research on ecolabeling in environmental education is carried out.

There is a study about a convergence between science and environmental education [1]. And next, there is a link between green consumers and eco-labeling [2]. The other study, eco-labeling of agricultural products is an approach to preserving the environment [3]. This ecolabel is socialized to the community members to reduce environmental hazards caused by the selection of products in the use of materials to increase agricultural production that is not environmentally friendly.

Another study states that the scent of non-ecolabel detergents is not environmentally friendly when compared to the scent of ecolabel detergents [4]. The detergent fragrance is very important for marketing purposes, but it can threaten human health and the environment. In this case, ecolabeling is needed to give a sign to products that are environmentally friendly and do not endanger human health. In a study also stated that for food products chosen by consumers are influenced by perceptions of product quality, product credibility, and willingness to pay [5]. Consumers prefer products with better quality and more reliable environmental information (ecolabel). This means that information related to environmental aspects of the product has its own meaning for consumers, so it is necessary to claim its products to be selected by consumers.

This study aims to determine: (1) to know ecolabel indicators and environmental education, (2) to find out the relationship between ecolabel and environmental education. This research is a combination of environmental education and ecolabels listed on environmentally friendly products and loaded with the meaning of environmental education for the transmission of various information and understanding to be provided to the public and not misleading related to environmental aspects of a product so that environmental maintenance can be sustainable. Furthermore, the community members will be more careful and conscientious in making decisions in choosing a product to be used, so as to create a community that is aware, caring, and responsible for the environment.

II. METHOD

The method used in this research is quantitative descriptive method. The sampling technique in this study was incidental sampling, which amounts to 1740 people, namely the community as consumers of various industrial products with a minimum level of education at a high school level and have worked (have their own income) based on predetermined criteria. The variables in this study are environmental education and ecolabeling.

This research will be combined between ecolabels listed on environmentally friendly products and loaded with the meaning of environmental education for the transmission of various information and understanding that will be provided to the public accurately, *verifiable* and not misleading related to the environmental aspects of a product that has a short life cycle to the environment, so that decision making in the selection of environmentally friendly products can be optimal and ends with environmental maintenance that is sustainable. Furthermore, the community members will be more careful and conscientious in making decisions in choosing products not only determined by price and quality, but also by environmental considerations that have a smaller impact, so that people who are aware, concerned and responsible for the environment are created.

The urgency of this research is to discuss ecolabeling in environmental education. The community has the opportunity to take part in the application of ecolabels through the selection of product categories and ecolabel criteria. The application of ecolabeling in environmental education as a transfer media that can be accessed easily, quickly, verifiable and not misleading, is actual and up to date, also helps preserve the life and welfare of the community, especially with regard to environmentally friendly products, which will ultimately contribute to maintaining quality living environment. The importance of this research carried out in preserving the environment, can also be used as a standard implementation procedure in environmentally friendly education, so that it can be developed comprehensively in other regions in Indonesia in the context of developing an environmentally conscious and environmentally conscious community. This study discusses the development of an ecolabel model in augmented reality-based environmental education. Integrated ecolabeling in environmental education in order to convey accurate information to consumers about environmental aspects of a product that has not been optimally carried out, aims to improve the environment. So that it will increase public awareness and concern as consumers to choose environ-

mentally friendly products for the sake of improving environmental quality that is sustainable.

III. RESULTS AND DISCUSSION

The adoption of environmentally friendly labels can encourage increased efforts in environmental management. This ecolabel information is used by buyers or prospective buyers in choosing the desired product based on consideration of environmental aspects and other aspects. On the other hand, product providers expect the application of environmental labels can influence consumers in making product purchasing decisions.

Ecolabeling is one of the ideas of the method of delivering information from products to consumers that is accurate, verifiable and not misleading, especially related to the environmental aspects of the products produced, the materials used and their packaging, which aim to encourage demand and supply of products produced environmentally friendly so that it can encourage sustainable environmental improvement. From a consumer's point of view, ecolabeling is information about the environmental impact of the product that will be used. So that the community has the opportunity to take part in the application of ecolabels through the delivery of inputs for the selection of product categories and ecolabel criteria. In addition, ecolabeling is able to encourage the level of awareness and awareness of consumers that in making decisions in the choice of product types is not only determined by price and quality factors but also based on other factors, namely environmental impact. Indicators of ecolabel success can be known from the existence of environmental quality improvement measures related to the activities of the production process that is supported by all components of the industrial actors including entrepreneurs, importers, distributors, government, communities and others. The ecolabel is informed that a product which gives information to consumers that the product in its life cycle has a relatively smaller negative environmental impact compared to other similar products without being marked ecolabeled. The life cycle of a product includes: the acquisition of raw

materials, the manufacturing process, distribution, utilization, disposal and recycling. Ecolabeling products are environmentally friendly products, which consider starting from legal raw materials and being sustainably managed, managing environmental aspects according to specified thresholds, waste management and efficient use of natural resources and will affect the preservation of forests as a source of raw materials.

A study states that greening is due to environmental education, namely environmental knowledge, attitudes, consumer behavior, and pro-environment in students and students [6]. Environmental education has a significant influence on environmental awareness, lifestyle, and everyday behavior. The need for higher education to integrate environmental education demonstrates a strong relationship between the intensity of environmental education knowledge and knowledge.

A study states that a strong attitude towards nature and the environment will produce positive behavior towards the environment [7]. A person's behavior can be predicted by knowing his attitude. The tendency to behave someone can also be determined by his attitude. Another study states that the increased demand for imported goods can be caused by the price or level of environmental friendliness of a product [8]. Competition can occur not only in price but also in the environmental friendliness of a product. This will also threaten domestic companies by increasing the volume of imported goods.

Other studies state that ecolabeling is a green brand, with a combination of implicit and explicit approaches to information processing for consumers [9]. This is a communication strategy for consumers related to environmental preservation information, which also influences consumer decision making regarding product selection.

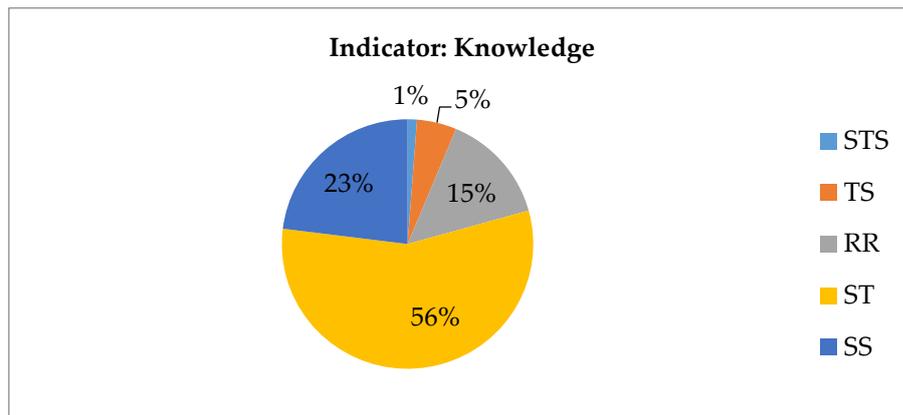


Figure 1. Indicators of knowledge in environmental education

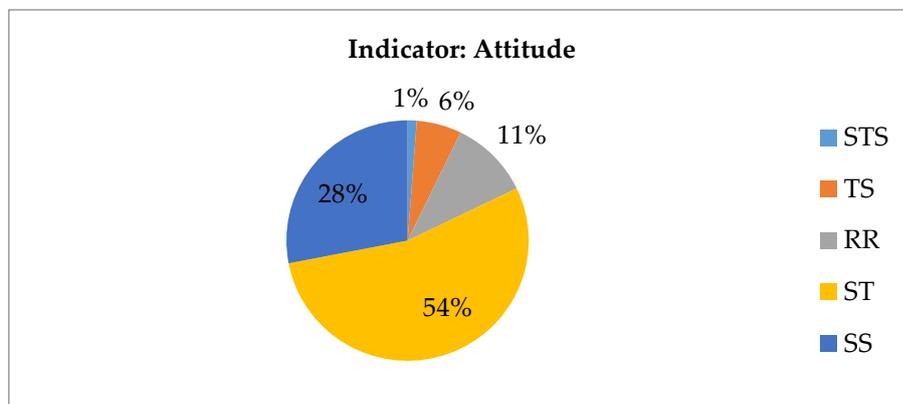


Figure 2. Indicators of attitude in environmental education

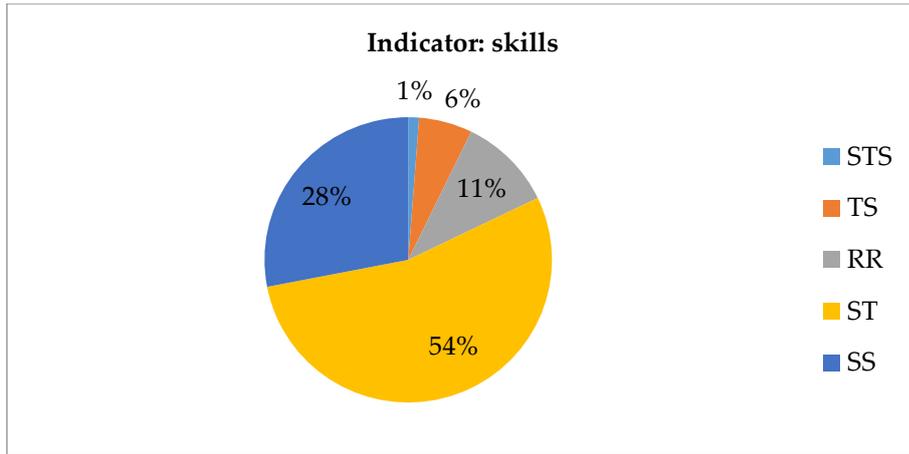


Figure 3. Indicators of Skills in Environmental Education

Table 1. Indicators of Environmental Education

Indicator: Environmental Education	STS	TS	RR	S	SS	Score	Total Score	Ideal Score	
Knowledge	83	353	995	3895	1594	6920	27324	34600	
	1%	5%	14%	56%	23%	100,0%	79%		
Attitude	84	416	736	3744	1940	6920	27800	34600	
	1%	6%	11%	54%	28%	100%	33%		
Skills	30	231	615	3981	2063	6920	28576	34600	
	0%	3%	9%	58%	30%	100%	83%		
Score Total							83700	103800	
Score Percentage							81%		

Based on the table above, it can be seen that indicators of knowledge from the aspect of environmental education obtain a total score of 27324 (79%), an indicator of attitude gets a total score of 27800 (83%), and indicator of skills gets a total score of 28576 (83%).

Respondents' responses to aspects of environmental education can be seen that the total score for environmental education is 83700 or the percentage score of 81% which is in the very good category.

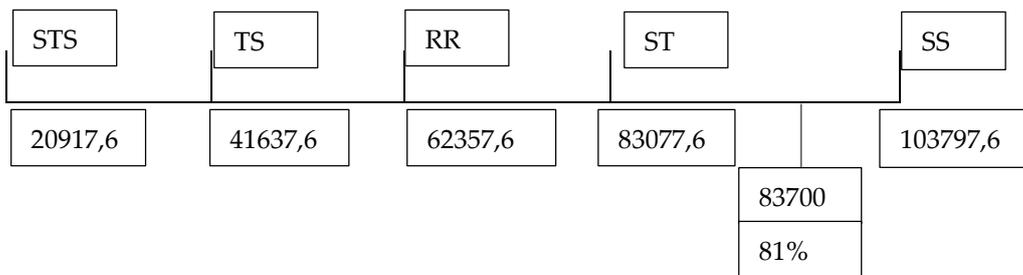


Figure 4. The Continuum line of Environmental Education

Ecolabel

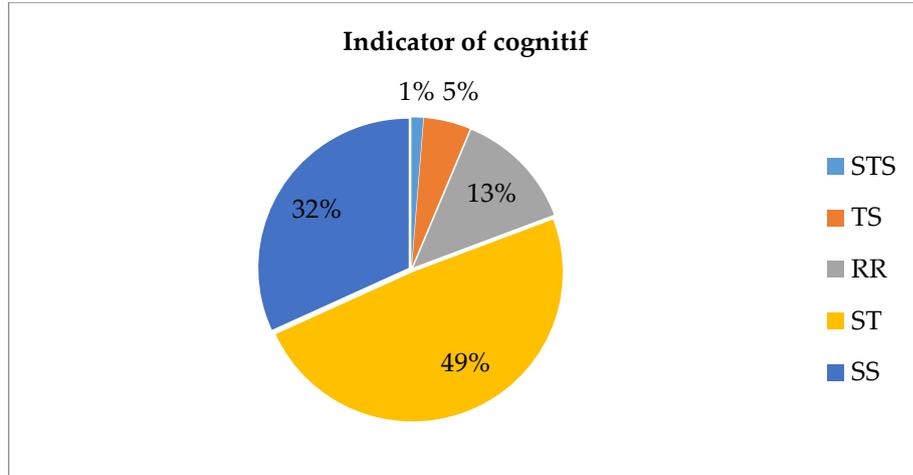


Figure 5. Indicators of cognitif in environmental education

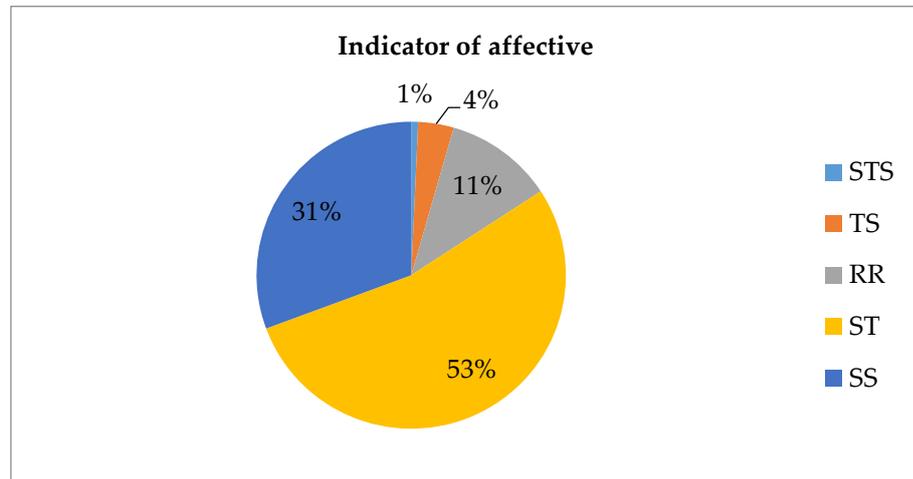


Figure 6. Indicators of affective in environmental education

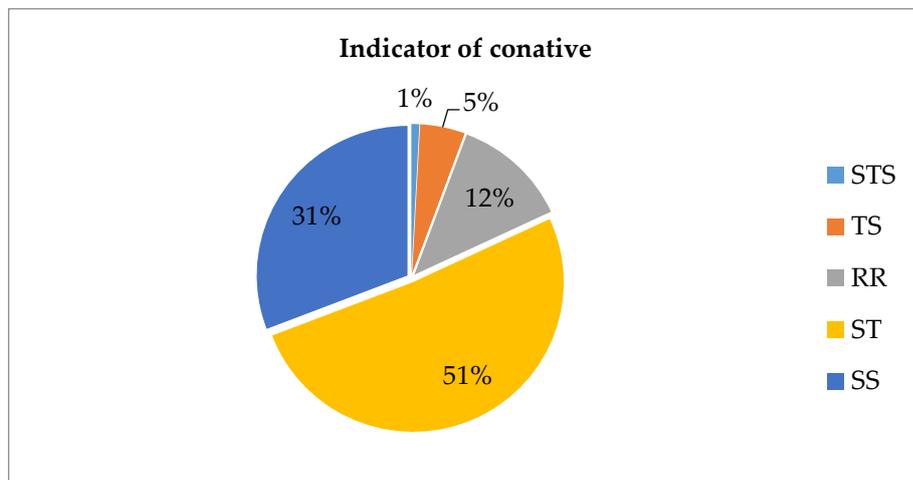


Figure 7. Indicators of conative in environmental education

Table 2. Indicators of Ecolabel

Indicator of Ecolabel	STS	TS	RR	S	SS	total	Total score	Ideal score
Cognitive	23	75	276	952	415	13851	56096	69255
	1%	5%	13%	49%	32%	100,0%	81%	
Affective	87	450	1376	6486	3711	12110	49614	60550
	0%	3%	9%	58%	30%	100%	82%	
Conative	103	583	1502	6191	3731	12110	49194	60550
	1%	6%	11%	54%	28%	100%	81%	
Score Total	213	1108	3154	13629	7857	38071	154904	190355
Score Percentage							81%	

Based on the table above, it can be seen that indicator of cognitive from the aspect of ecolabeling obtained a total score of 56096 (81%), indicator of affective obtained a total score of 49614 (82%), and indicator of conative

obtained a total score of 49194 (81%). Respondents to the ecolabel aspect seen that the total score for the ecolabel is 154904 or the percentage score of 81% which is in the very good category.

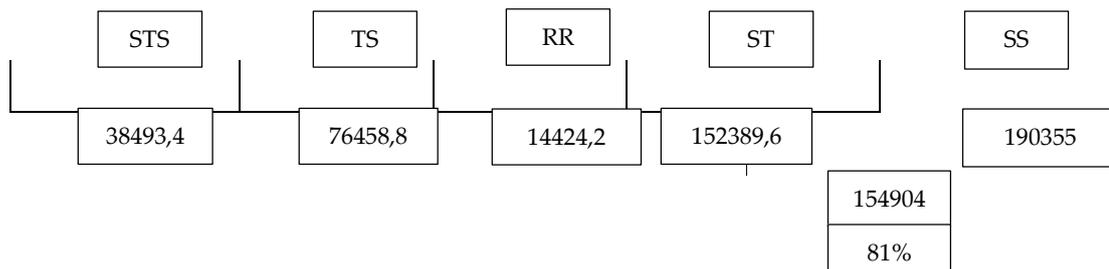


Figure 8. The Continuum line of Ecolabel Indicators

Table 3. The Relationship between Environmental Education and Ecolabeling

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	21.009	1.161		18.100	.000
	ekolabel	.290	.012	.489	23.298	.000

a. Dependent Variable: VAR00001

Based on the Pearson product-moment correlation test, the results obtained as the table

above, where it can be seen in the column Sig. 0,000 or probability < 0,05. Then Ho is rejected or there is a significant relationship between environmental education and ecolabeling. This

also means that the public has the opportunity to take part in the application of ecolabels through the selection of product categories and ecolabel criteria. The application of ecolabeling in environmental education as a media of transfer is actual, up to date, and not misleading, contributing to the preservation of people's lives and well-being, especially with regard to environmentally friendly products, which will ultimately contribute to maintaining environmental quality.

Ecolabeling can be integrated into environmental education, as a source of learning for the needs of the community as consumers of accurate, verifiable and non-misleading information, in the end the outcome of this research is saving the environment through eco-labeling in environmental education for environmental sustainability to support life. Application of environmental education that prioritizes saving the environment, preserving the lives and well-being of the local community, especially those relating to community understanding of product selection that has not been optimally carried out, shows that product selection is not only determined by price and quality but also environmental considerations, which in turn can reduce the quality of the environment itself.

IV. CONCLUSIONS

Ecolabeling is a means of delivering accurate information to consumers about the environmental aspects of a product. Ecolabels can be symbols, labels or statements on the packaging. Ecolabel in the form of a statement that shows the environmental aspects and is one of the instruments in the framework of environmental management. The use of ecolabeling to provide product information to consumers. Through ecolabeling the public as consumers get information about the environmental impacts of the products to be used and also functions for the selection of products by consumers, who prefer smaller environmental impacts compared to other similar products. The community has the opportunity to take part in the application of ecolabels through the selection of product categories and ecolabel criteria.

The positive relationship between environmental education and ecolabeling shows that ecolabeling provides information on the environmental aspects of a product which also provides informal environmental education to the community members. This is done in order to preserve the environment and can also be made for people who are literate and environmentally conscious. Through ecolabeling in environmental education means also providing knowledge and understanding, problem-solving, and skills correctly according to the norms and ethics, especially those related to the environmental aspects of the products produced, materials used, and packaging used, which will ultimately encourage salvation environmentally sustainable. The application of ecolabeling in environmental education also helps to preserve the life and welfare of the community, especially with regard to environmentally friendly products, which will ultimately contribute to maintaining environmental quality. It is also able to encourage the level of awareness and awareness of the community as consumers, that in making decisions in the choice of product types is not only determined by price and quality factors but also based on other factors, namely environmental impact, so that environmental improvement is sustainable. The implication of environmentally friendly products will get a place in the hearts of consumers, otherwise products that are not environmentally friendly will automatically disappear and disappear in the market.

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