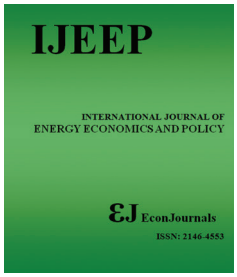

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The Effect of Eco-label and Renewable Energy Projects Knowledge on Environmental Awareness for Elementary School Students

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ABSTRACT

Recently, environmental awareness has been an essential element for environmental sustainability and need researchers' focus. Thus, this study aims at finding out the effect of eco-label and renewable energy projects knowledge on environmental awareness for 409 sixth grade elementary school students in the Province of Jakarta. In this study, data collection used questionnaires with the analysis technique of the Structural Equation Model (SEM). The findings indicate that eco-label and new renewable energy projects predict student environmental awareness. Indicators involving environmentally informative instruments, environmentally friendly labels, and environmental protection stimulate eco-label. Indicators consisting of environmental practices, environmental attitudes, and noble values of sustainability support student environmental awareness. This study offered to use eco-label and new renewable energy projects to improve student ecological awareness for elementary school students in the Province of Jakarta.

Keywords: Eco-label, Environmental Awareness, Sustainability
JEL Classifications: F64, K32, O13

1. INTRODUCTION

The serious impact of the lack of public awareness in maintaining the environment will influence physically the environment leading to a bigger disaster. Therefore, it is very important for every community to raise awareness in maintaining cleanliness in the community. The impacts of environmental issues are now commonly felt in everyday life. Awareness to care for the environment is getting higher. This awareness began to penetrate in consumption activities. Products that meet the needs of the community are now starting to consider environmental aspects in their production. Furthermore, in distribution and marketing, the environmental aspect is also an important consideration (Chen et al., 2019; Chien et al., 2021d; Sadiq et al., 2021a). An eco-label is a certification of the environmental performance of a product. Eco-labels are intended for products that have minimal impact on the environment. Ecolabeling is based on life cycle considerations. This means that the assessment is carried out thoroughly from upstream to downstream (Chien et al., 2021a; Guo et al., 2020). Likewise, the information about the renewable energy resources through direct interaction with the consumption of renewable energy resources or information about the renewable energy project, its features and consequences regarding the environmental quality enhances the environmental awareness among the employees (Chien et al., 2021e; Haq et al., 2020; Tan et al., 2021; Zyadin, 2015).

Environmental awareness is needed to achieve sustainable development goals. Environmental education is considered to be an effective method for increasing environmental awareness for students. Environmental education can be a realistic solution to deal with ecological problems. The literature on questionnaire

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surveys has investigated the effect of environmental education activities on student knowledge (Chien et al., 2022; Galli et al., 2020; Nawaz et al., 2020; Xueying et al., 2021). When the environment provided students, there was a significant improvement in their knowledge and changed their behaviours towards the environment. We believe that environmental education through eco-label and renewable energy project information can be constructive practices in upgrading responsiveness of sustainability issues among students. Eco-labels sustain in pinpointing the product's general environmental priorities, focusing on proof on environment-associated product standards, presenting tools for consumers to set apart environmentally harmless and beneficial products, authorizing producers to apply eco-friendly raw material and contents comfortably and diminishing trouble on the environment from a product. The targets of handling eco-labels are to keep away from deceiving of environmental broadcast, to be acquainted with and stir consumers for capturing environmentally advantageous, and to supply market-based stimulant with less environmental consequences on products and production. Ecolabelling is one of the instruments that has been initiated to issue strips of confirmation and manifest the environmental hospitableness that delivers encouragement for the consumers on notified decision making on their acquisition (Hao et al., 2020; Huang et al., 2021b; Marrucci et al., 2021; Sadiq et al., 2021b). Similarly, the energy patterns applied in the institutions, households, or society, and their consequences & impacts on the environment, create environmental awareness in the students and enable them to judge the effective sources of energy that must be applied to attain a sustainable climate or clean environmental. Through formal and informal ways, the information provided to students about the renewable energy project with all its aspects like resources, production ways, production features, consumption of renewable energy, cost factor, the possible impacts of renewable energy production and consumption on the environment, enhances their environmental awareness (Assali et al., 2019; Bhatti and Nawaz, 2020; Huang et al., 2021c; Sadiq et al., 2021c).

Many studies examine some impacts of environmental education on related ecological behaviours. Environmental education guides protection activity and conduct and tangible environmental enhancement. Environmental education encompasses perspective, mechanism, and plan of action that enlarge and support environmentally related viewpoint, benefits, alertness, knowledge, and skills preparing people to take informed steps on behalf of the environment (Prabowo et al., 2020; Shah et al., 2021; Xiang et al., 2021; Zhao et al., 2021). However, these prior studies have not examined in detail related to eco-label, renewable energy project information and environmental awareness. Therefore, our study inspected the impact of eco-label and renewable energy project information on ecological awareness for elementary school students in the province of Jakarta. The main research questions in this study were:

1. Does eco-label affect environmental awareness for elementary school students in the province of Jakarta?
2. Does renewable energy project information affect environmental awareness for elementary school students in the province of Jakarta?

Our research attempted to answer the following research problems:

- Does eco-label stimulate elementary school student environmental awareness in the province of Jakarta?
- Does an environmentally informative instrument, ecologically friendly label, and environmental protection predict eco-label?
- Do environmental practices, environmental attitudes, and noble values of sustainability support elementary school student ecological awareness in the province of Jakarta?
- Does new renewable energy projects stimulate elementary school student environmental awareness in Jakarta?

Student environmental awareness has been a favourite topic of investigation among scholars; still, the present study is a great contribution to the literature. (1) Mostly, the authors have analyzed the formal ways of information as the source to enhance the student environmental awareness. Only a few studies have discussed the role of eco-label, and renewable energy project information in developing student environmental awareness and even most of these studies adopt an indirect approach to build a link among these factors. So, the present study adds significantly to the literature with the direct relation of eco-label and renewable energy project information to student environmental awareness. (2) In the past literature, eco-label and renewable energy project information both have been addressed as indicators of student environmental awareness in different articles. Even no single study is found that deals with the eco-label and renewable energy project information in relation to student environmental awareness at the same time. The present collective analysis of eco-label and renewable energy project information in relation to student environmental awareness is a theoretical contribution. (3) The lack of environmental awareness has been a serious issue in Jakarta, but a little research has been made to investigate the eco-label and renewable energy project information's role in student environmental awareness. That's why the present study which examines the eco-label and renewable energy project information in relation to environmental awareness among the students in the education sector of Jakarta.

The present study is comprised of six parts. The 2nd part examines the relationship of eco-label and renewable energy project information with student environmental awareness with reference to the previous studies and their arguments about the nature of the relation. In the third part, the applied mechanism for the data acquisition from the concerned region and the ways to analyse the relationship among eco-label, renewable energy project information and student environmental awareness has been described. In the fourth part, the results regarding the variables and the reliability of their relation are extracted. In the fifth part, through alignment of the study results with the past studies, the credibility of the results is attained. The sixth part concludes the whole, shows its implications, and also describe some limitations.

2. LITERATURE REVIEW

It's not dubious that human activities are widely responsible for damaging the environment (Nawaz et al., 2021; Othman et al., 2021; Shair et al., 2021). A negative human impact is evident from the fact that greenhouse gases concentrations have been increased by more than a third because of the exponential increase

in industrial activities. That is why it is the duty of humans to have environmental awareness and mend their behaviour accordingly (Hussain et al., 2021; Moslehpour et al., 2022a; Xu et al., 2018). It is essential that we must teach our children about the facts related to the environmental quality, the natural climate balance and environmental features, the causes of the climate imbalance and environmental deterioration, the possibilities to recover the natural climate balance and environmental quality, the ecological friendly practices, and the role of the climate resilience and environmental sustainability in economic sustainability (Liu et al., 2022; Moslehpour et al, 2022b; Rustam et al., 2020). There are many different formal and informal ways like eco-labels, environmental discussions, ecological friendly training, renewable energy project information etc., to create environmental awareness in the students and prepare them for contributing to the environmental sustainability and sustainable country's development. The study examines the eco-labels and renewable energy projects in creating student environmental awareness. A large literature is about environmental awareness on account of eco-labels and renewable energy projects. The study examines many of the research articles for analysing the authors' views about the impacts of eco-label and renewable energy project information on student environmental awareness.

Ecolabelling is a voluntary way of certifying and labelling the environmental performance of the firms which produce the goods concerned. This is used all over the world for representing the ecological friendly awareness, sense of responsibility or accountability towards the environment, and their environmentally friendly initiatives. It is a sign or short description of the products that have been proved to be environmentally desirable. It enhances the environmental knowledge or information of the students who interact with the products or services having eco-labels (Baloch et al., 2021; Moslehpour et al., 2021; Mufidah et al., 2018). Taufique et al. (2019), argues that eco-labels are a type of sustainability measurement that is directed to customers, with the goal of making it simple for the customers to consider environmental issues and ecological friendly criteria while they are shopping. There are different types of eco-labels though their basic aim is to arouse environmental awareness. Some labels use units of measurement and index scores to quantify pollution or the use of resources that have a special effect on environmental quality. At the same time, there are some others that throw light on the set of practices or needs for environmental sustainability or environmental damage reduction. But any type of eco-label arouses environmental awareness in the product users (Chien et al., 2021b; Di Martino et al., 2019; Mohsin et al., 2021).

Song et al. (2019) and Hsu et al. (2021), present their views about the eco-labelling role in developing environmental awareness among the young Chinese generation. A total of 2349 questionnaires were randomly administered to university students through Wechat and Q.Q. The students' list was made from the criteria of Beijing and Anhui universities. But only 699 useful responses were acquired. For the statistical analysis of the relationship among the research variables, SPSS and AMOS with a structural equation model were used. The research implies that eco-labelling has a positive relation to student environmental awareness as the eco-labels on the products gives information about the environmental concerns and environmental attitudes of the firms, which stirs the students' environmental thinking and develop environmentally-friendly behaviour especially when they have to make purchases and using the similar products. Song et al. (2020), examines the green marketing and eco-labelling impacts on students' environmental awareness. The random sampling technique was applied, and data were acquired from 745 university students of the Chinese education system through electronic questionnaire distribution. For quantitative analysis of eco-labelling relation to students' environmental awareness, confirmatory factor analysis (CFA) and structural equation modelling (SEM) was applied. The study posits that the eco-labels indicate the environmental issues which are likely to occur because of the resource's extraction and the production processes with the focus on minimizing the negative environmental impacts of these resources and production processes. Thus, these eco-labels enhance the environmentally friendly knowledge of students.

The research was conducted by Safitri et al. (2021) investigates the eco-label impacts on environmental awareness and environmental behaviour. The students of Universitas Negeri Jakarta in East Jakarta in the province of DKI Jakarta serve as the sample of the research, and data regarding the eco-labels impacts on students' environmental awareness and environmental behaviour were collected from 146 students and data were analysed with a structural equation model (SEM). This study deals with three characteristics of eco-labelling like an environmentally informative instrument, ecological friendly label, and environmental protection and checks their influences individually on students' environmental awareness and environmental behaviour. The study findings confirm that there is a positive linkage of eco-label with students' environmental awareness and environmental behaviour. In-depth research about university competitiveness with the green content inclusion in syllabus and eco-labelling Okanović et al. (2021) integrate the relation of eco-labelling to the students' environmental awareness. The research was collected from the students of the University of Novi Sad in Serbia and the University of Gothenburg (Sweden). The study implies that the institutions where the managers make policies to include in the curriculum to educate the students about the eco-labelling, train their students how they can have information from eco-labels about the environmental concerns and the ecological friendly practices. This shapes the ecological friendly thinking and behaviour of the students. So, there is a positive relationship between eco-label and students' environmental awareness. Hence, it can be assumed:

H_2: Eco-label has a positive relation to student environmental awareness.

Different renewable energy projects are planned and carried out on communities or the economy. The purpose of these projects is to ensure the production and use of renewable energy in order to meet the energy requirements both at the domestic and commercial level for reducing the increasing use of energy and removing the negative environmental impacts of non-renewable energy, which release greenhouse gases or chemicals while being used or come into existence (Buldur et al., 2020; Huang et al., 2021a;

Li et al., 2021). The renewable energy projects include different practices like the planning for renewable energy consumption, renewable energy production investment, and the availability of technologies, infrastructure, or instruments that can be run through renewable energy, providing information about the renewable energy and its uses, and training how to produce or utilize the renewable energy. The views of Drosos et al. (2021) about the renewable energy projects show that these projects are an effective tool to create environmental awareness in public. In many educational institutions, the administrators themselves, through ecological friendly discussions among teachers and students, make environmentally friendly content additions in the syllabus, and through training, provide the renewable energy projects information. This motivates the students' observation and learning about renewable energy uses from environmental perspectives and force them to think of contributing to environmental protection by changing their behaviour towards energy consumption (Chien et al., 2021c; Ehsanullah et al., 2021; Eshiemogie et al., 2022; Liu et al., 2021).

Altuntaş and Turan (2018), examines the renewable energy projects effects on student environmental awareness. With the help of a five-point Likert scale, the quantitative data about the students' environmental awareness from renewable energy project information has acquired a sample of six hundred secondary school students. And the qualitative data was acquired through the semi-structured interviews to 5% of the sample, which is equal to 30 students (randomly selected). The results revealed a significant positive correlation between the renewable energy project information and the effective cognitive, environmental awareness among students who are to step on the stairs to sustainable economic development. However, the study finds the difference in the level of students' environmental awareness because of the change in the field of study, grade level, and ways of information about renewable energy resources. Zafar et al. (2020), in their study on the renewable energy project contribution to environmental quality, examines the impacts of renewable energy project education on students' environmental awareness. The data associated with the factors and their impacts on one another were collected from OECD countries over the time spanning between 1990 and 2015. The second-generation methodologies were adopted for the empirical estimation of the influences of a renewable energy project, related information, student environmental awareness, and environmental quality. The results indicated that renewable energy project and related information has significant positive impacts on environmental awareness among the students. When the students observe in their practical life the use of renewable energy projects and their impacts on the environment and environmental elements, they gain environmental awareness. Moreover, the informative campaigns for renewable energy adoption enhance the knowledge of students about environmental pollutants and the use of renewable energy in reducing environmental deterioration.

Deforestation, land degradation, climate change, pollution spread, unclean water and food problems are some of the environmental concerns which could affect the health of living creatures and the natural resources which are compulsory for humans' domestic and economic life. Youth or the students are the assets of a country that could divert the direction of the economy towards sustainable development if they have environmental awareness. Feeling this need Rahman (2020) wrote about the renewable energy projects' impacts on environmental awareness among the Malaysian youth. The authors adopted a qualitative research technique and acquired data from reviewing journal articles, newspapers, reports, documents, and other publications related to renewable energy projects and environmental awareness. The results stated that the renewable energy informative projects carried on the country get the youth to become familiar with their environment, the environmental quality, the impacts of energy resources on the quality, and the reduction of environmental pollution through the renewable energy transition. The doubts are cleared, and the environmental awareness increases. Similarly, the Ayyoub and Radaydeh (2021) also considers the impacts of energy resources on environmental quality and checks the role of renewable energy projects on environmental awareness in the country. The study posits that non-renewable energy has a deteriorating adverse impact on the environment. While renewable energy resources not only reduces the adverse impacts but also serves as a cleansing against environmental pollution like climate change through greenhouse gas emissions. Considering the environmental significance of renewable energy, different projects are carried on for creating awareness among the youth about renewable energy resources and their particulars. Based on the above literary reviews, we can hypothesize:

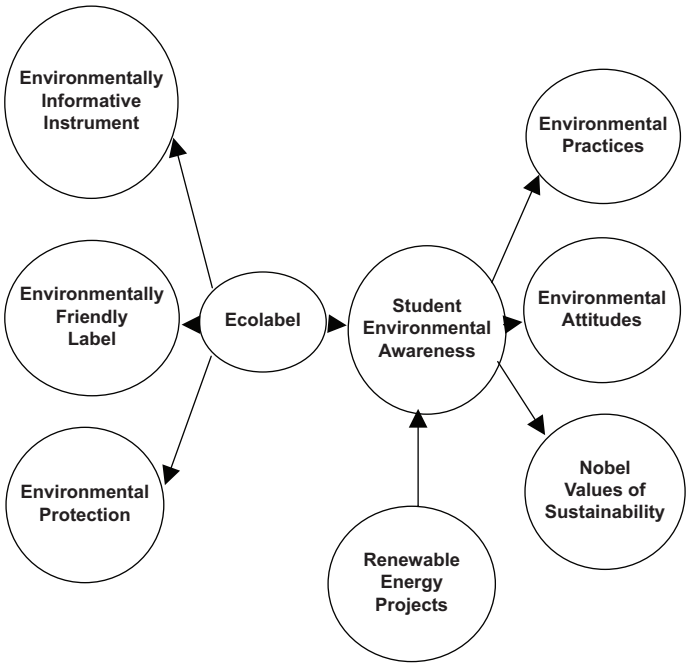
H_2: Renewable energy project has a positive relation to student environmental awareness.

3. RESEARCH METHODS

The present article examines the effects of eco-label and renewable energy projects on environmental awareness of sixth grade elementary school students in the Province of Jakarta. Data was collected using a questionnaire survey concerning eco-label and renewable energy projects as the exogenous variables and student environmental awareness as the endogenous variable in this research. There were replied 409 sixth grade elementary school students in the Province of Jakarta to the survey. To confirm the validity of items for each variable in this research, the literature content analysis of student environmental awareness and showing that student apprehension of the environment is predicted by green manner, ecological mind-set, and worthy morals of sustainability. It altered the student apprehension of the environment into statements in the questionnaire provided to 409 students in the Province of Jakarta in Indonesia. The researchers have distributed the questionnaires using personal visits and using simple random sampling. In addition, the current article has applied the smart-PLS to test the association and examine the validity and reliability of the constructs. The theoretical framework based on past studies has been developed as under in Figure 1.

In addition, eco-label variable (ECL) puts to use three indicators being composed of environmentally informative instrument (EII), environmentally friendly label (EFL), and environmental

Figure 1: Theoretical framework



protection (E.P.). EII is composed of three sub-indicators consisting of EEI1, EE2 and EE3 stating that a means used in pursuing an aim or policy in providing useful or interesting information about the surrounding. Statement of each sub-indicators was described in the questionnaires seen in Table 1.

EFL measures three sub-indicators containing EFL1, EFL2, and EFL3 introducing a narrow horizontal strip attached on the object giving information being not harmful to the environment. Statement of each sub-indicators was portrayed in the questionnaires noted in Table 2.

E.P. estimates three sub-indicators incorporating EP1, EP2, and EP3 giving a description about the action of conserving environment from destruction. Statement of each sub-indicators was represented in the questionnaires perceived in Table 3.

Environmental awareness (EAW) variable applies three indicators including environmental practices (EVP), environmental attitudes (EVA), and Noble values of sustainability (NVS). EVP is predicted by four sub-indicators embracing EVP1, EVP2, EVP3, and EVP4 affirming performance of an activity related to the natural world. Statement of each sub-indicators was explained in the questionnaires spotted in Table 4.

EVA is estimated by four sub-indicators embracing EVA1, EVA2, EVA3, and EVA4 declaring an action or mental state about environment. Statement of each sub-indicators was presented in the questionnaires observed in Table 5.

NVS is determined by five sub-indicators embodying NVS1, NVS2, NVS3, NVS4, and NVS5 revealing righteous principles in order to maintain an ecological balance or avoid the depletion of natural resources. Statement of each sub-indicators was offered in the questionnaires observed in Table 6.

Table 1: EII Questionnaires

Sub-Indicators	Items
EEI1	"Providing accessible message to consumer about the environmental attributes of the product."
EII2	"Giving the consumer knowledge about the production standards of the product."
EII3	"Transmitting green product messages."

Table 2: EFL questionnaires

Sub-indicators	Items
EFL1	"Indicating the products coming from environmentally friendly substances."
EFL2	"Communicating a sense of environmental consideration on the part of the manufacturer to consumer."
EFL3	"Arousing consumer interest to purchase environmentally friendly products."

Table 3: E.P. Questionnaires

Sub-Indicators	Items
EP1	"Assisting to diminish the volume and toxicity of pollutants."
EP2	"Encouraging consumer awareness development about product impact on the environment."
EP3	"Driving ecologically conscious consumer behavior."

Table 4: EVP questionnaires

Sub-Indicators	Items
EVP1	"Comprehending the meanings of environmental issues."
EVP2	"Being in charge of environmental problems at one's place."
EVP3	"Discussing about environmental problems with others."
EVP4	"Getting involved in environmental awareness activities."

Table 5: ECP questionnaires

Sub-Indicators	Items
EVA1	"Feeling disappointed with air pollution."
EVA2	"Feeling disappointed with river pollution."
EVA3	"Appreciating biodiversity."
EVA4	"Aware of being responsibility towards environment,"

Table 6: NVS questionnaires

Sub-Indicators	Items
NVS1	"Trying to reduce amount of waste by collecting materials recycled."
NVS2	"Not using plastic bag to wrap things."
NVS3	"Conserving the use of electric energy."
NVS4	"Conserving the use of water supply."
NVS5	"Composting the food residue to become fertilizer."

Renewable energy projects (REP) is determined by five sub-indicators embodying REP1, REP2, REP3, REP4, and REP5

revealing the new energy projects make sense in the student about environmental awareness. Statement of each sub-indicators was offered in the questionnaires observed in Table 7.

4. RESULTS

The findings can be seen as the measurement model in Figure 2. In Figure 2, it can be understood that factor loadings applied in this model. The factor loadings values are larger than 0.50. In addition, Alpha and C.R. values are exposed the values more than 0.70 that is the indication of data reliability in the study. The average variance extracted (AVE) values are exposed larger than 0.50 values that show convergent validity is valid. Table 8 shows these values.

The current article has check the discriminant validity using Fornell Larcker and the results exposed that the first value in the column is larger than the other values indicating that the link with variable itself is stronger than other variables. Thus, the discriminant validity approved as valid and low association among variables. Table 9 shows these values.

The current article has also check the discriminant validity using cross-loadings and the results exposed that the items of the particular variable are larger than the other items of other variables indicating that the link with variable itself is stronger than other variables. Thus, the discriminant validity approved as valid and low association among variables. Table 10 shows these values.

The current article has also check the discriminant validity using Heterotrait Monotrait (HTMT) ratio and the results exposed that the values are not bigger than 0.90. Thus, the discriminant validity approved as valid and low association among variables. Table 11 shows these values.

In Table 12 and Figure 3, it can be seen that associations between EII, EFL, and E.P. and eco-label were 0.885, 1.865, and 0.819, respectively, being significant at the 0.05 level according to the

Table 7: REP questionnaires

Sub-Indicators	Items
REP1	"'I feel a sense of trust in the project organizers."
REP2	"I am in favour of the project. I feel a sense of pride in the project."
REP3	"I feel that my views about the project have been taken into account."
REP4	"I think the setting up and development of the project has been carried out in a fair way."
REP5	"The project has only gone ahead because of local community support and involvement."

Table 8: Convergent validity

Items	Loadings	Alpha	CR	AVE
EEI1	0.844	0.863	0.917	0.786
EEI2	0.916			
EEI3	0.898			
EFL1	0.847	0.816	0.891	0.731
EFL2	0.889			
EFL3	0.829			
EP1	0.872	0.850	0.909	0.768
EP2	0.878			
EP3	0.879			
EVA1	0.771	0.798	0.868	0.622
EVA2	0.790			
EVA3	0.804			
EVA4	0.790			
EVP1	0.911	0.832	0.890	0.672
EVP2	0.807			
EVP3	0.675			
EVP4	0.867			
NVS1	0.812	0.834	0.883	0.601
NVS2	0.781			
NVS3	0.741			
NVS4	0.769			
NVS5	0.771			
REP1	0.880	0.848	0.892	0.626
REP2	0.726			
REP3	0.850			
REP4	0.806			
REP5	0.673			

Figure 2: Measurement model assessment

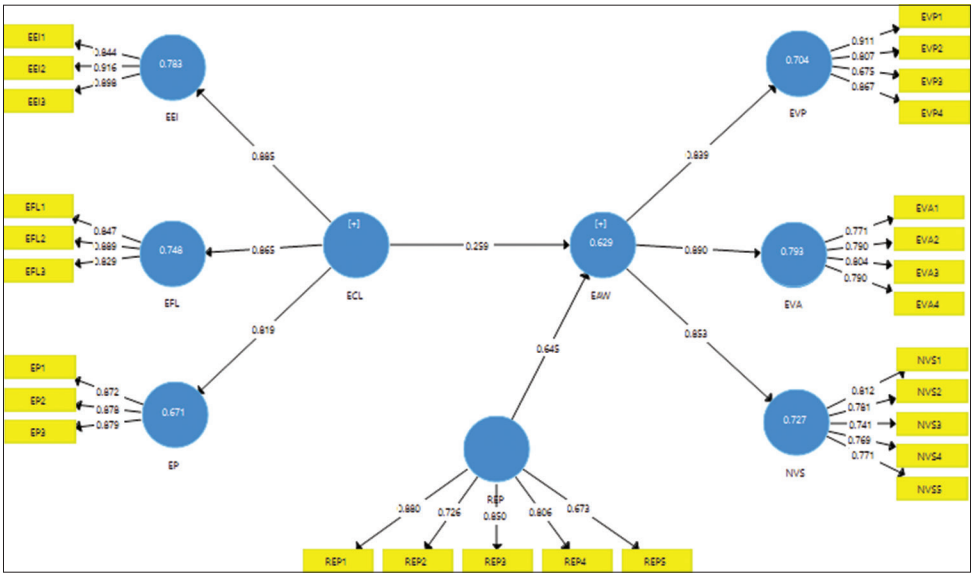


Figure 3: Structural model assessment

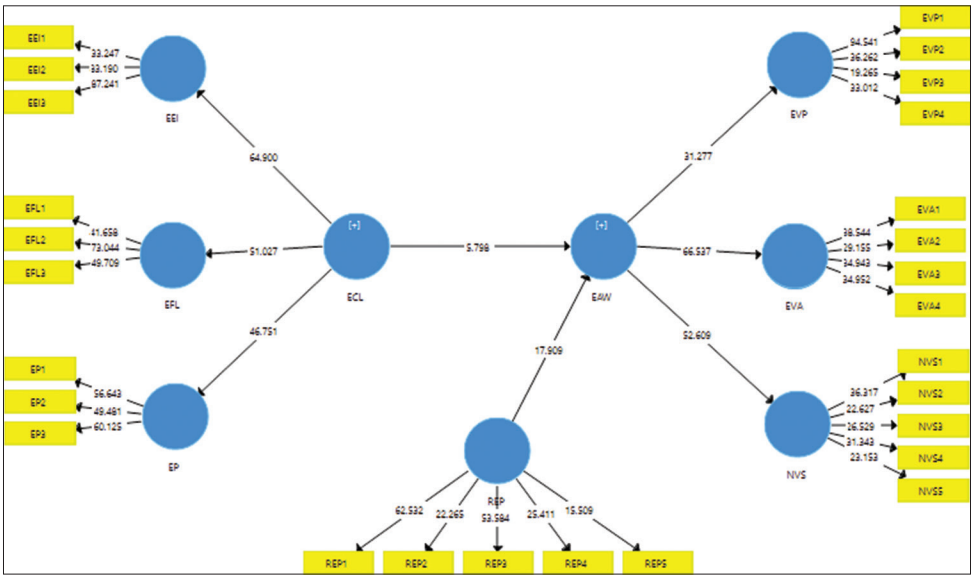


Table 9: Fornell Larcker

	EEI	EFL	EP	EVA	EVP	NVS	REP
EEI	0.88						
EFL	0.69	0.85					
EP	0.56	0.54	0.87				
EVA	0.43	0.47	0.57	0.78			
EVP	0.26	0.27	0.43	0.68	0.82		
NVS	0.31	0.37	0.45	0.63	0.52	0.77	
REP	0.29	0.34	0.49	0.67	0.52	0.73	0.79

Table 10: Cross-loadings

	EEI	EFL	EP	EVA	EVP	NVS	REP
EEI1	0.847	0.52	0.503	0.370	0.242	0.240	0.241
EEI2	0.916	0.645	0.517	0.354	0.242	0.296	0.257
EEI3	0.894	0.657	0.494	0.418	0.215	0.288	0.279
EFL1	0.583	0.847	0.427	0.384	0.257	0.287	0.288
EFL2	0.567	0.889	0.436	0.404	0.219	0.379	0.280
EFL3	0.623	0.829	0.517	0.435	0.222	0.304	0.316
EP1	0.575	0.528	0.872	0.540	0.419	0.396	0.421
EP2	0.424	0.429	0.878	0.516	0.386	0.387	0.426
EP3	0.484	0.454	0.879	0.448	0.334	0.423	0.456
EVA1	0.323	0.307	0.419	0.771	0.579	0.509	0.537
EVA2	0.344	0.320	0.417	0.790	0.690	0.411	0.483
EVA3	0.353	0.470	0.517	0.804	0.444	0.541	0.574
EVA4	0.332	0.415	0.459	0.790	0.422	0.537	0.551
EVP1	0.221	0.258	0.359	0.616	0.911	0.484	0.454
EVP2	0.208	0.193	0.364	0.555	0.807	0.377	0.378
EVP3	0.297	0.253	0.433	0.542	0.675	0.431	0.496
EVP4	0.146	0.184	0.275	0.510	0.867	0.423	0.404
NVS1	0.275	0.269	0.419	0.521	0.379	0.812	0.644
NVS2	0.184	0.284	0.300	0.394	0.425	0.781	0.472
NVS3	0.292	0.347	0.334	0.447	0.406	0.741	0.469
NVS4	0.237	0.356	0.370	0.586	0.474	0.769	0.649
NVS5	0.210	0.203	0.350	0.486	0.343	0.771	0.586
REP1	0.229	0.356	0.383	0.597	0.413	0.710	0.880
REP2	0.315	0.234	0.483	0.526	0.485	0.481	0.726
REP3	0.225	0.293	0.431	0.605	0.453	0.640	0.850
REP4	0.180	0.299	0.309	0.501	0.323	0.622	0.806
REP5	0.213	0.156	0.354	0.436	0.420	0.400	0.673

t statistics indicated that the eco-label is significantly related to EEI, EFL and E.P. In this study, it is proposed that eco-label has

Table 11: Heterotrait Monotrait ratio

	EEI	EFL	EP	EVA	EVP	NVS	REP
EEI							
EFL	0.819						
EP	0.661	0.643					
EVA	0.518	0.593	0.696				
EVP	0.313	0.331	0.520	0.833			
NVS	0.365	0.456	0.543	0.772	0.629		
REP	0.344	0.407	0.586	0.822	0.636	0.856	

Table 12: Path analysis

Relationships	Beta	S.D.	T Statistics	P-values
EAW -> EVA	0.890	0.013	66.537	0.000
EAW -> EVP	0.839	0.027	31.277	0.000
EAW -> NVS	0.853	0.016	52.609	0.000
ECL -> EEI	0.885	0.014	64.900	0.000
ECL -> EFL	0.865	0.017	51.027	0.000
ECL -> EP	0.819	0.018	46.751	0.000
REP -> EAW	0.645	0.036	17.909	0.000
ECL -> EAW	0.259	0.045	5.798	0.000

effectively communicated environmentally friendly concerns of products. The advantages of environmental friendliness of eco-label can make people learn about the environmental concern. The relevant provision of information from eco-label can affect individual perceptual value on the environmentally friendly commodity. This study measures that eco-label conforms to new attitudes towards environmental values. High ecological risk consciousness powerfully provokes green technology alteration. The green resources allocated are sharply picked out and treated intelligently to raise green innovation capacity. Support should be provided in order to contrive green innovation grand design and intensify green technological proficiency through people with getting bigger awareness of environmental conservation.

Table 12 and Figure 3, also display that EVP, EVA, and NVS are positively correlated with student environmental awareness reaching 0.890, 0.839, and 0.853, respectively. There is a widespread perception that ecological education is significantly

positively associated with environmental awareness. The ecological product information provided by eco-label can promote individual environmental literacy related to environmental problems and its solution to enhance environmental awareness. In this context, ecological education through eco-label can give knowledge and essential information source for individuals to learn about environmental concerns. It reveals that eco-label as an ecological education raising individual psychological perceptions can be a significant determinant of ecological awareness.

In Table 12 and Figure 3, it can be seen that the structural model test showing a direct effect of eco-label on student environmental awareness with a significant coefficient of 0.259 at the 0.05 levels. This finding exposed that eco-label seems to change individual behaviour toward the environment. The present study addresses eco-label effects on potentially significant psychological impacts of green labelling in the built environment. Moreover, the findings reported here illustrate that the beneficial effect of eco-label can feasibly bring about individual environmental literacy and thereby improve environmental awareness. In addition, Table 12 also showing a direct effect of REP on student environmental awareness with a significant coefficient of 0.645 at the 0.05 levels.

5. DISCUSSION AND CONCLUSIONS

The results stated that eco-label has a positive relation to student environmental awareness. The results are in line with Preziosi et al. (2019), which implies that the eco-labels give information about the practices undertaken for the protection of the environment and the living creatures like plants, land, air, & water creatures in it. The students who have the ability to check and understand the eco-labels placed on the products get awareness about the particular environmental concerns and particular ecological friendly activities. These results also agree with Alamsyah et al. (2020), which shows that the eco-labels show which resources or what sort of material the firms utilize for the production of the goods and also highlights the environmental benefits of their activities and products. The students gain awareness about the necessities for the quality environment from eco-labels and use this awareness while making actions in practical life. These results match with Gao et al. (2021), who argues on environmental awareness through eco-labels. The eco-labels create ecological awareness in the students or other products users as they convey about the product environmental quality maintenance on the part of the firms. The environmentally aware students use their knowledge while making purchases, and thus, they contribute to environmental sustainability and climate resilience.

The results stated that renewable energy project has a positive relation to student environmental awareness. These results are supported by Weber et al. (2014), who checks the renewable energy projects and environmental awareness. They argue that in the countries where the government or environmental regulators arrange for the campaigns to promote the renewable energy projects and educate the public about the significance of renewable energy consumption and production, the students also come to know the ways of environmental sustainability and its significance. These results are also in line with the previous study of Qu et al. (2011), which reveals that the educational institutions include a specific portion of curriculum and non-curriculum syllabus for the encouragement of renewable energy adoption. This explains the significance of renewable energy like wind power, solar energy, geothermal power, and biomass to the students and develops environmental awareness in the students. These results highlight that the renewable energy projects which are carried on in the community force the students to ponder on these products and related particulars. This creates awareness in the students about the environmental significance of renewable energy in contrast to non-renewable energy.

In Indonesia and many other countries, economic development is at risk because of the lack of awareness among the public, especially the students who are the assets of a nation and are responsible for future economic activities. There is a need to enhance the student environmental awareness so that they may be able to understand the environmental concerns, mitigate their causes, and protect the environment, while a good quality environment is a key to gaining sustainable development goals. The study was to address and remove this issue. The study was aimed to analyse the impacts of eco-label and renewable energy project information with student environmental awareness. The authors did research on the education sector of Jakarta in Indonesia and had responses to questionnaires from students about the relationship between eco-label and renewable energy project information and student environmental awareness. The results showed that eco-label and renewable energy project information have a positive relation to student environmental awareness. The results revealed that the eco-label which reveals the ecological friendly features of the products, the practices which the concerned companies undertake to mitigate the negative impacts of the resources or processes employed, and the environmental contributions of the firms. This not only conveys the ecological friendly features of the products but also create awareness in user students about the environmental issues and their solutions. So, the inclusion in the business policies to use eco-labels on the packaging of their products increases the students' environmental awareness. The results indicate that the projects to use or produce renewable energy in domestic or commercial activities around the students or the knowledge about the renewable energy production and consumption projects from the teachers, books, or other learning resources, create environmental awareness in the students. Thus, an increase in renewable energy project information enhances student environmental awareness.

6. IMPLICATION AND LIMITATIONS

The present study has theoretical as well as empirical implications. It has great theoretical significance. It adds a lot to the theory on environmental awareness. The study examines the impacts of environmental awareness in the students of an education system, the students who are the future of an economy. The study analyses the influences of eco-label and renewable energy projects on student environmental awareness. The eco-label and renewable energy projects are the two different environmental informative variables that create the student environmental awareness and have yet been discussed separately and mostly in

an indirect relation to the student environmental awareness. The present study amalgamates these two variables and establishes a direct relation of these two variables to student environmental awareness. The study administered a research survey to Jakarta in Indonesia for the 1st time to examine the eco-label and renewable energy project's role in creating student environmental awareness. The present study makes a number of empirical implications. The government, which wants sustainability in the economic development through environmental protection, must pressure the business to place eco-labels on the products and institutions to make the students recognize the eco-labels so that the students can gain environmental awareness. The government must also develop renewable energy projects within the country and spread the related information through social or educational campaigns for it creates students' environmental awareness. Similarly, the students for getting sustainability in their own career through environmental information must be watchful while interacting with the products produced and sold by different businesses and the renewable energy projects knowledge. The educational institutions must form education strategies to get the students to gain environmental awareness from eco-labels and renewable energy projects.

Many limitations are associated with the present study. First, this analyses only two factors like eco-label and renewable energy projects while analysing the student environmental awareness. The most significant factors such as teacher skills, institutional policies, sources of learning, information or communication technology, and social media have utterly been ignored in the analysis of creating student environmental awareness even though these variables have a significant impact on student environmental awareness. Thus, the current study does not present the complete picture of student environmental awareness and requires attention from future scholars. The present study leaves an empty corner in the sense that its results are based only on the data about eco-label and renewable energy project role in student environmental awareness collected from a city of Indonesia only how a small area of a country can give reliable results about variables and their relations. So, future authors should select multiple regions across the world for the sample of research about eco-label and renewable energy project role in student environmental awareness.

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