

Original Research

Promoting Eco-Friendly Consumption Behavior in Vocational High School Students: A Comprehensive Case Study of Educational Approaches

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Background: Students can be taught eco-friendly consuming habits through classroom learning activities with the help of teachers and other school-related activities. The study's focus is a case study completed at a vocational high school. We seek to understand the broad-reaching consequences that this teaching strategy might evoke by examining the potential implications of integrating environmentally responsible consumption practices within an educational framework. Through a thorough case study, we aim to shed light on how incorporating environmentally responsible consuming practices into schooling could support more general educational goals and encourage sustainable habits. Internalizing this through character education entails setting models and developing routine behaviors based on school policies and extracurricular activities in addition to integrated environmental education. This supports the long-term integration of these ideals into students' personalities. **Method:** This research uses a survey methodology and is explanatory. The SPSS (Statistical Package for Social Science) was used to analyze the data. 95 respondents make up the sample size for the sampling method, which uses proportionate random sampling. **Result:** According to the research's findings, integrating character education and general education are impacted by internalizing environmentally responsible consumption habits.

Keywords: Eco-Friendly; consumption behavior internalization; education; character education

1. INTRODUCTION

Consumption behavior has a significant impact on the entire production process and the resulting waste. The increase in population directly correlates with a rise in waste generation, which, if left unchecked, can lead to significant environmental issues. Many studies pointing out that pollution stemming from human activities affects not only water bodies but also air and soil quality as well as impacting human health.⁽¹⁾ While some waste generated by human activities can be naturally neutralized by the environment, materials like plastics and glass cannot be easily neutralized. The capacity of nature to manage such waste is finite and will eventually be overwhelmed, particularly without proper control over the habits and behaviors of the population, coupled with the pace of development.⁽²⁾ It is crucial to awaken

awareness among individuals, especially teenagers and students who represent the future generation. The concept of being the nation's successors entails possessing noble character and intelligence, aligning with the national education objectives.⁽³⁾ However, a disparity exists between the goals of nurturing intelligence and character development. Schools often lean more towards intellectual intelligence development, sidelining character development.

Many students are still unaware of environmental values, especially when it comes to consumption behavior. This is why students have yet to develop environmental consciousness, for instance, in their disposal habits, energy conservation practices (such as electricity, fuel, and water), consumption of foods containing five process-coloring, sweeteners, thickeners, flavorings, preservatives, and responsible shopping habits. To instill environmentally friendly values into their characters, the school needs to establish a simple, specialized program that can be easily implemented by students, such as "Green schools." This approach aims to emphasize the process through which character values can become internalized within the students themselves.⁽⁴⁾ According to Djuwita and Benyamin (2019), students from green schools had a stronger tendency to act environmentally friendly than those from public schools, even though both schools have environmental education in their curriculum.⁽⁵⁾ In contrast, both students from green and public schools having the same level of appreciation and understanding in terms of nature relatedness. This fact underscores that environmentally friendly behavior is still perceived as an abstract need. If the internalization of values does not occur optimally, it can result in the failure to manifest environmental character values in the behavior of learners.

Consumer understanding of eco-friendly products is also limited to how the product's usage can prevent pollution and save electricity. Other aspects such as the product's impact on health and ecosystems, as well as its recyclability, remain only partially understood by a small fraction of consumers. The internalization of students in environmentally friendly consumption behavior can be achieved through education at school, education within families, and education within community settings. This study focuses on examining the influence of implementing the internalization process of environmentally friendly consumption behavior on school education through integrated character education.

This encompasses teaching processes, school management, and extracurricular activities.

2. METHODS

This study was explanatory research and utilizing a survey approach. Explanatory research aims to elucidate the positions of the studied variables and the relationships between one variable and others. This research falls under causal or cause-and-effect research, employing survey methodology, which employs a structured instrument in the form of a questionnaire for data collection. The research time horizon was cross-sectional, indicating data collection within a specific time frame. This study has an independent variable, which is the internalization of environmentally friendly (eco-friendly) consumption behavior (X). The intervening variable (Y) was integrated character education, while the dependent variable was education (Z). We refer to education as learning, skills, and habits resulting from the teaching, training, or research process and passed on to the next generation.

The total student population was 1,714. The sampling technique used was proportional random sampling, a method where a certain number of members are selected from each population group to be included in the sample. Each member of the group had a probability proportional to the relative size of the group included in the subsample. As a result, a sample size of 95 students was obtained. This involves selecting 13 students from each class as part of the sample. The path coefficient demonstrates the magnitude of direct influence, while indirect influence was assessed by multiplying the standardized path coefficient values along the formed paths. This process involves path analysis and is facilitated using SPSS version 20 software.

3. RESULTS AND DISCUSSION

The following presents the description of variables in this study. The Internalization of eco-friendly Consumption Behavior (X) utilizes 4 questions, Integrated Character Education (Y) employs 7 questions, and Educational (Z) utilizes 5 questions, as depicted in Table 1. Based on Table 1, the results for the question "Students adhere to regulations to perform environmentally friendly actions," the mean value obtained is 4.53, indicating that respondents agree. The question "Students are accustomed to disposing of trash in its designated place," the mean value obtained is 4.33,

indicating that respondents agree. As for the question "Students engage in environmentally friendly activities," the mean value obtained is 4.40, indicating that respondents agree. The question "Having an environmental awareness," the mean value obtained is

4.60, indicating that respondents agree. This demonstrates that students agree with the internalization of eco-friendly consumption behavior, as evidenced by an average respondent score of 4.45 (agree).

Table 1. Variables descriptions internalization of eco-friendly consumption behavior, integrated character education and education among vocational high school students 2023

Item description	Score										Mean	
	Strongly Agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly Disagree (1)			
	F	%	F	%	F	%	F	%	F	%		
<i>Internalization of Eco-friendly Consumption Behavior (X)</i>												
X1.1	Students adhere to regulations to perform environmentally friendly actions.	17	46%	19	51%	1	3%	0	0%	0	0%	4.53
X1.2	Students are accustomed to disposing of trash in its designated place.	19	51%	16	43%	1	3%	0	0%	1	3%	4.33
X1.3	Students engage in environmentally friendly activities.	16	43%	17	46%	4	11%	0	0%	0	0%	4.40
X1.4	Having an environmental awareness.	27	73%	8	22%	2	5%	0	0%	0	0%	4.60
<i>Integrated Character Education (Y)</i>												
Y1.1	Students have a high level of religious spirituality.	6	16%	4	11%	20	54%	7	19%	0	0%	3.07
Y1.2	Students act and behave in accordance with what is practiced.	12	32%	3	8%	15	41%	0	0%	7	19%	3.10
Y1.3	Students never lie.	12	32%	10	27%	14	38%	1	3%	0	0%	3.30
Y1.4	Students have a sense of tolerance among their peers.	7	19%	13	35%	17	46%	0	0%	0	0%	3.37
Y1.5	The level of student discipline is high.	4	11%	9	24%	13	35%	11	30%	0	0%	3.07
Y1.6	Students have determination in education.	5	14%	5	14%	20	54%	7	19%	0	0%	3.03
Y1.7	Students have a strong work ethic.	3	8%	8	22%	19	51%	7	19%	0	0%	3.26
<i>Education (z)</i>												
Z1.1	Students' education influences the economic level.	13	35%	17	46%	7	19%	0	0%	0	0%	3.93
Z1.2	There is an economic disparity among students' education.	14	38%	12	32%	11	30%	0	0%	0	0%	4.33
Z1.3	Students come from various different cultural backgrounds.	15	41%	14	38%	8	22%	0	0%	0	0%	4.60
Z1.4	Students possess a high level of scientific and technological abilities.	17	46%	15	41%	5	14%	0	0%	0	0%	4.20
Z1.5	Education influences students' mental and behavioral aspects.	5	14%	22	59%	10	27%	0	0%	0	0%	3.87

The results of the answers for the variable "Integrated Character Education (Y)" are explained as follows; question "Students have a high level of religious spirituality," the mean value obtained is 3.07, indicating that respondents are neutral. As for the question "Students act and behave in accordance with what is practiced," the mean value obtained is 3.10, indicating that respondents are neutral. The question "Students never lie," the mean value obtained is 3.30, indicating that respondents are neutral. As for the question "Students have a sense of tolerance among their peers," the mean value obtained is 3.37, indicating that respondents are neutral. The question "The level of student discipline is high," the mean value obtained is 3.07, indicating that respondents are neutral. As for the question "Students have determination in education," the mean value obtained is 3.03, indicating that respondents are neutral. The question "Students have a strong work ethic," the mean value obtained is 3.26, indicating that respondents are neutral. This demonstrates that students respond neutrally, with an average respondent score of 3.17 (neutral), indicating that the integrated character education is perceived as such by the students.

The results of the answers for the variable "Educational Assessment (Z)" are explained as follows; question "Students' education influences the economic level," the mean value obtained is 3.93, indicating that respondents are neutral. The question "There is an economic disparity among students' education," the mean value obtained is 4.33, indicating that respondents agree. The question "Students come from various different cultural backgrounds," the mean value obtained is 4.60, indicating that respondents agree. The question "Students possess a high level of scientific and technological abilities," the mean value obtained is 3.87, indicating that respondents are neutral. The question "Education influences students' mental and behavioral aspects," the mean value obtained is 4.47, indicating that respondents agree. This shows that respondents are neutral regarding certain aspects of educational assessment while agreeing with others, as reflected in the average respondent scores provided.

The results pertaining to the internalization of environmentally friendly consumption behavior among the students have shown a positive trend. The mean values for the questions related to this variable indicate a generally high level of agreement among respondents. The fact that students reported adhering to regulations for environmentally friendly actions, being accustomed

to proper waste disposal, engaging in environmentally friendly activities, and possessing an environmental awareness underscores their awareness of the importance of eco-friendly behavior. The significant agreement with these statements suggests that efforts towards inculcating eco-conscious habits are proving effective.

The neutral responses observed in the integrated character education variable, particularly in aspects like religious spirituality, behavior alignment, and student discipline, might reflect a balanced mix of viewpoints. This neutrality could stem from the diversity of perspectives and cultural backgrounds within the student body. However, certain statements related to tolerance and work ethic garnered higher levels of agreement. This suggests that while certain dimensions of integrated character education might require further attention and exploration, others have been successful in fostering shared values and ethical foundations.

The results related to educational assessment provide insights into how students perceive the impact of education on various aspects. The neutral responses regarding the influence of education on economic levels and high scientific and technological abilities indicate a certain level of uncertainty or complexity in these domains. However, the agreement on the presence of economic disparities among students' education and the influence of education on students' mental and behavioral aspects highlights the acknowledgment of educational effects on social dynamics and personal development.

The findings from these variables collectively emphasize the importance of a comprehensive and well-rounded educational approach. The success in promoting environmentally friendly behavior and aspects of character education indicates the efficacy of the current pedagogical strategies. However, the neutral and varied responses in certain areas of character education and educational assessment suggest the need for further investigation and refinement of these aspects. In future studies, delving deeper into the neutral responses and understanding the factors influencing them could provide valuable insights for enhancing integrated character education and educational assessment. Additionally, ongoing efforts to reinforce the positive responses observed in environmentally friendly consumption behavior can contribute to a sustainable and responsible generation.

3.1 Pathway analysis

Utilizing path analysis, we are capable of testing and developing structural hypotheses encompassing both direct and indirect causal effects. A prominent application of path analysis is mediation, which posits that a variable can exert influence on an outcome both directly and indirectly through another variable.⁽⁶⁾ Figure 1 illustrates the framework of relationships among the variables of interest in this study. It is revealed that via integrated character education, the impact of internalization of eco-friendly consumption behavior on education is more significant compared to its direct influence ($0.531 > 0.350$).

Character education is an Indonesian government-sponsored initiative that has been in place since 2010. Character development can be integrated into the teaching and learning process, which implies that every topic must be linked to a norm or value, as well as improved and used in daily life.⁽⁷⁾ According to Nada et al. (2021), environmental education has influenced

students' character traits such as honesty, self-confidence, responsibility, discipline, caring for fellow humans, caring about nature, courage, religion, and creativity.⁽⁸⁾ Character education implemented early in a student's educational path will generate graduates who are not only academically prepared but also with positive character traits and preserve the qualities in society.⁽⁹⁾ Furthermore, Begum et al. (2021), observed that environmental moral education is thought to have a substantial impact on students' pro-environmental behavior.⁽¹⁰⁾

Internalization of eco-friendly consumption behavior and integrated character education constitute two factors contributing to 48.1% of education among Vocational High School Students. Meanwhile, other factors are influenced by variables beyond the scope of this research. However, upon examining the summarized findings presented in Table 2, it becomes apparent that internalization of eco-friendly consumption behavior alone holds a greater degree of influence on education, amounting to 48.4%.

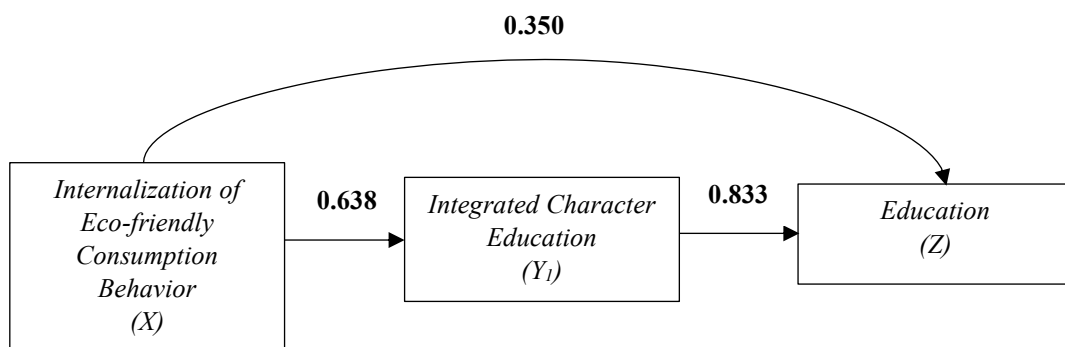


Figure 1. Pathway analysis diagram

Table 2. Summary of Pathway analysis for examining the influence of implementing the internalization process of environmentally friendly consumption behavior on school education through integrated character education (N=95)

Dependent variable/ variable entered	R ²	F	Standardized coefficient β	t
Integrated Character Education				
Internalization of eco-friendly consumption behavior	0.484	4.507	0.638	5.242
Education				
Internalization of Eco-friendly Consumption Behavior	0.481	4.885	0.350	4.767
Integrated Character Education			0.833	5.946

The standardized coefficient β for X through Y is 0.638×0.350

Students who internalize eco-friendly consumption behaviors through integrated character education might develop greater understanding of environmental issues, which could shape their attitudes and decisions, both within and beyond the educational

context. Integrated character can contribute to the development of positive traits and behaviors that have a cascading effect on education. Students are encouraged to utilize critical thinking to pick which one to use in their argument. Students are instructed to analyze the

available information and then create a list of the advantages and disadvantages of each decision they make.⁽¹¹⁾ Behaviors like empathy, responsibility, and integrity foster a conducive learning environment and holistic personal growth.

4. CONCLUSION

In conclusion, this study sheds light on students' perceptions of environmentally friendly behavior, integrated character education, and educational assessment. The mixed responses underline the need for a balanced approach to education that not only imparts knowledge but also nurtures ethical values, social awareness, and personal growth.

Conflict of Interest

None

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