Increasing Green Consumer Behavior through Optimizing the Sukorame Waste Management System (SIMPOSKO) to Support SDG's

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Abstract. Waste is a problem that can threaten sustainability. In Kediri City, waste generated from households and businesses reaches 140 tons every day. One of the efforts to overcome this is through technological called the Sukorame Waste Processing Management System (SIMPOSKO) which has educational features, waste bank profiling features, waste recycling product catalogues, and mini games. It is hoped that SIMPOSKO can improve Green Consumer Behavior that cares about the environment. The aim of this research is to analyze SIMPOSKO users' perceptions of Green Consumer Behavior and how SIMPOSKO optimization must be done to improve Green Consumer Behavior. This research uses a qualitative approach. The research results show that SIMPOSKO has been able to increase Green Consumer Behavior, but just in awareness of the dangers of waste and the need for waste recycling, has not yet reached the point of purchasing waste recycling products. To optimize SIMPOSKO in improving Green Consumer Behavior, it is necessary to improve the user interface, website appearance, appearance of mini games that are more attractive as well as update quiz questions, and also update features according to real time and real stock. By optimizing SIMPOSKO, it can support in achieving sustainable development goals (SDGs), especially goal 6 (clean water and sanitation) and goal 11 (sustainable cities and communities).

Keywords: Green Consumer Behavior, SIMPOSKO, System, SDG's.

1   Introduction

Green consumer behavior or consumer behavior that cares about the environment is becoming increasingly important in facing global environmental challenges. Green consumer behavior is individual behavior that is influenced by their concern for the surrounding environment (Leonard & Meilina, 2024). The characteristics of green consumer behavior include: preferring environmentally friendly products and accommodation, being sensitive to and appreciating local culture, caring and enthusiastic about seeking new experiences, and preferring to be a participant rather than a spectator (Peneda de Oliveira & Sousa, 2019).

Green Consumer Behavior is also implemented in consumer behavior in purchasing waste recycling products as well as in their own waste processing efforts. Waste production in Kediri City is relatively large. Plastic waste as a type of waste that is difficult to decompose needs to be a concern. The average waste discharge in Kediri City generated from households and business premises reaches 140 tons every day. Public awareness of the importance of environmental conservation is needed. One important initiative is good waste management so that it can reduce negative impacts on the environment. Plastic waste management is included in the Green Economy concept, which is one of the national priority areas for maintaining environmental sustainability. Green economy emphasizes the efficient and responsible use of resources, including the management of plastic waste to minimize negative impacts on the environment and increase the efficiency of resource use (Fitri & Ferza, 2020). International studies show that Indonesia is one of the countries that has a large contribution to the spread of plastic waste into the sea. Therefore,

managing plastic waste is crucial in the context of environmental conservation, especially in relation to the health of coral reef ecosystems (Wahidah et al., 2023). Efforts to apply the principle of Reduce, Reuse, Recycle (3R) in managing household waste have become a popular approach in Indonesia, which is in line with the concept of a green economy (Ridayati & Yunastiawan, 2022). Understanding the 3R concept is a form of environmental knowledge as the basis for Green Consumer Behavior that everyone should have in order to ensure sustainable development goals (SDGs), especially goal 6 (clean water and sanitation) and goal 11 (sustainable cities and communities).

Managing plastic waste, one of which is through the practice of recycling behavior, can have an impact on economic aspects. For example, recycling plastic waste for household crafts can become a new source of income for the community, which is in line with the concept of ecopreneurship (Ariyunita et al., 2022). Managing plastic waste through innovation into economically valuable products can provide economic benefits if it is followed by green consumer behavior as the target and target market (Paeno et al., 2020). Training, education and outreach regarding plastic waste management must also be followed by increasing green consumer behavior so that efforts to increase public awareness of the importance of waste management can create added economic value (Sakuntalawati et al., 2022). Public participation is the key to success in creating a clean, green and sustainable environment (Sandra & Radityaningrum, 2021).

In line with the current digital era, the success of the green economy and sustainable economy with plastic waste management through the E-waste bank application is increasingly likely. The Melati Sukorame Waste Bank is a concrete example of this effort, where the community is invited to manage waste and utilize it into products that have selling value. However, these efforts did not meet the expectations of the management and volunteers of the Melati Waste Bank, thereby reducing enthusiasm and motivation to produce products made from recycled waste due to a lack of interest in purchasing waste recycling products. Through the PPK Ormawa 2023 program carried out by Management Study Program Student Association of Nusantara PGRI Kediri University at Melati Sukorame Waste Bank Sukorame, which produced an innovative website-based application called SIMPOSKO (Sukorame Waste Processing Management System). SIMPOSKO provides information about processed waste products from the Melati Sukorame Waste Bank, mini games about environmental education and various waste management efforts that can be carried out by the community. So far, SIMPOSKO has been accessed by 157 people in the city of Kediri, so this shows that there is interest and attention from the public towards good waste management information available on the website.

Figure 1. SIMPOSKO Registration and Use Process

Date	Product	Qty	Price	Sum	
01-07-23		Balance for Juni 2023		Rp	-
01-08-23		Balance for Juli 2023		Rp	-
01-09-23		Balance as of August 2023		Rp	-
	Aromatherapy Candles :				
03-09-23	3 candles (promo bundle)	3	IDR 10,000	Rp	30,000
	3 candles (promo bundle)	3	IDR 10,000	Rp	30,000
	Aromatherapy candles				
10-09-23	3 candles (promo bundle)	3	IDR 10,000	Rp	30,000
	3 candles (promo bundle)	3	IDR 10,000	Rp	30,000
	1 candle	1	IDR 15,000	Rp	15,000
23-09-23	Aromatherapy candles	3	IDR 10,000	Rp	30,000
	Vases of flowers from newspapers	1	IDR 25,000	Rp	25,000
29-09-23	Aromatherapy candles	15	IDR 10,000	Rp	150,000
30-09-23		Saldo per September 2023		Rp	340,000
05-10-23	Aromatherapy candles	10	IDR 15,000	Rp	150,000
11-10-23	Aromatherapy Candles promo bundle	3	IDR 10,000	Rp	30,000
17-10-23	Knitted bags	2	IDR 25,000	Rp	50,000
21-10-23	Aromatherapy candles	15	IDR 15,000	Rp	225,000
22-10-23	Aromatherapy candles	7	IDR 15,000	Rp	105,000
29-10-23	Medium Tissue Box	5	IDR 25,000	Rp	125,000
31-10-23		Balance October 2023		Rp	1,025,000
01-11-23	Aromatherapy candles	19	IDR 15,000	Rp	285,000
30-11-23		Saldo November 2023		Rp	1,310,000

**Figure 2. Sales of Processed Waste Products of Jasmine Waste Bank,
before and after PPK Ormawa Himmanusa. Primary Data Sources 2023**

However, SIMPOSKO has not been fully utilized by the community, as evidenced by the minimal sales of waste recycling products marketed through SIMPOSKO. Therefore, a strategy is needed so that the platform functions optimally according to the needs of its users to increase Green Consumer Behavior. Referring to this phenomenon, this research aims to analyze the user experience of the SIMPOSKO platform and the extent to which the effectiveness of the platform is able to support Green Consumer Behavior and how efforts must be made to optimize SIMPOSKO in improving Green Consumer Behavior.

2   Methods

This research uses a qualitative approach that is used to examine the condition of natural objects and the researcher is the key to a research (Sugiyono, 2019:25). Data collection was obtained from a combination of observation, interviews and documentation. So this research uses primary and secondary data. Primary data was obtained by direct interviews with informants. Meanwhile, secondary data was obtained through books, journals, literature and other supporting documents.

There were three informants in this study. In determining informants, researchers used 4Rs (Meilina & Sardanto, 2020): 1) Relevance, ensuring that the informant understands the problem being studied, 2) Recommendation, selecting informants based on recommendations from key informants, 3) Readiness, conducting interviews when the informant is ready to be interviewed, 4) Reassurance, the informant states his willingness to provide honest, clear and open answers. Based on these criteria, three informants were selected, consisting of 2 men and 1 woman. The selection of informants was based on recommendations from the system manager taking into account users who were considered active in using SIMPOSKO.

Data validity is needed to prove that the data obtained can be justified through data verification. In this study, researchers used source triangulation to confirm and validate the results by using different data sources for each informant.
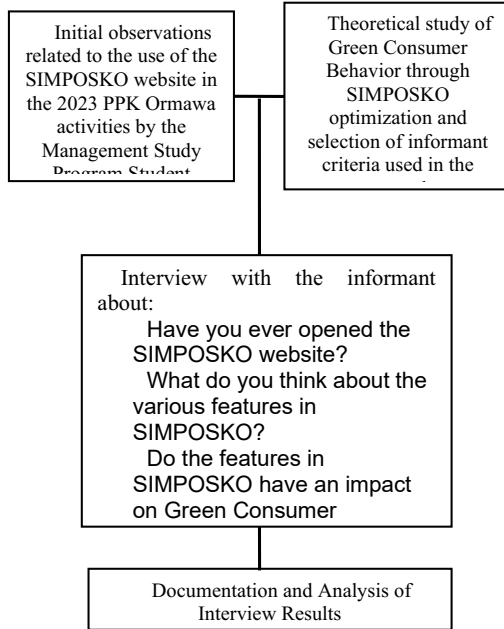

Figure 1. Research Framework

3   Results

This research data was obtained from the results of in-depth interviews regarding the use of SIMPOSKO. 3 different sources became informants for this research to obtain the validity of the data submitted. The following are the results of interviews conducted with 3 different informants:

Table 1. Interview Result

Question	Informant (Initial)	Answer	Interpretation
a. Have you ever opened the SIMPOSKO website?	WW	*Once but rarely open now.*	The three informants had used SIMPOSKO and even had a SIMPOSKO user account
	MG	*Yes, I have..*	

	AL	*I already had an account, hehe..*	
b. What do you think about the various features in SIMPOSKO?	WW	*Hmm.... I think the features it self is pretty enough, the appearance and features of the website is also general...*	The features contained in SIMPOSKO are quite good but the appearance is not attractive.
	MG	*The features are actually good, but the display is still a bit lacking..*	
	AL	*Pretty cool, and the information is informative...*	
c. Do the features in SIMPOSKO have an impact on Green Consumer Behavior?	WW	*Enough, but not completely..*	Based on the three informants, the entire feature has quite an impact on Green Consumer Behavior. However, not completely.
	MG	*Hmm, it does have an impact but not enough yet..*	
	AL	*Yes, it has an impact*	
d. If you have used SIMPOSKO, what do you feel has the most impact on Green Consumer Behavior?	WW	*Education and waste recycling product catalog section are the most impactful section for me*	Part of SIMPOSKO that can stimulate Green Consumer Behavior is the waste education section. Where it contains all the knowledge, dangers and how to manage waste properly.
	MG	*Quiz and garbage education. Because you can get to know it more widely.*	
	AL	*Hmm, the information section about the dangers of waste and processed waste products are pretty impactful to me..*	
e. Do you think there are features that must be	WW	*The User Interface could be further improved...*	Based on the three informants, the display on the SIMPOSKO website can be improved again so that it is more attention-grabbing
	MG		

improved in SIMPOSKO to be more optimal?		*The appearance of the website can be further improved. To make it more interesting, for the appearance of mini games also to be more interesting and many quiz questions are updated....*	and updated always according to the current situation (real time)
	AL	*Roughly the features it's completely okay, maybe it will be updated more often according to real time and real stock...*	

Discussion 1. SIMPOSKO User Perceptions

Based on the results of the interviews, it is known that the three users already have SIMPOSKO accounts but are starting to rarely use them. According to the three users, SIMPOSKO has a fairly good and informative appearance, but is still not attractive. The absence of updates to the system certainly makes SIMPOSKO users feel bored and no longer actively open the system. A monotonous display and all the contents are known without any further changes, making users no longer interested in opening the system. For this reason, there is a need for regular system updates starting from displays, information, games to adding displays for recycled products being marketed.

Discussion 2. SIMPOSKO's Role in Improving Green Consumer Behavior

The answers of the three informants showed that SIMPOSKO was enough to improve Green Consumer Behavior for them. However, the Green Consumer Behavior that they carry out has not reached the purchasing stage but has only reached awareness of the importance of waste processing. The features that are most liked and can improve the Green Consumer Behavior of the three informants are the educational feature on the importance of waste processing and the dangers that can be caused by waste, the quiz feature, and the catalog feature of marketed waste recycling products. Even though the catalog was quite interesting, it was not able to attract the three informants' interest in purchasing the product. Further research is needed specifically for this marketing feature. The lack of purchasing waste recycling products can reduce the motivation of waste bank administrators in Sukorame to produce waste recycling products. An optimal marketing strategy is needed to increase sales of waste recycling products in order to increase the income of waste banks in Sukorame.

Discussion 3. Efforts to Optimize SIMPOSKO

In order for SIMPOSKO to be more optimal in improving Green Consumer Behavior, several improvements are needed. According to the three informants, improvements must be made starting from the user interface, website appearance, more attractive display of mini games as well as updates to quiz questions, and also feature updates according to real time and real stock. Training is needed for system managers in UI/UX and updating the display of information, games and catalogues.

4   Consclusion

The results of the research can be concluded that SIMPOSKO has been able to increase Green Consumer Behavior, but it is still limited to increasing awareness of the importance of waste processing and the dangers of unprocessed waste, not yet reaching the point of purchasing products. To optimize SIMPOSKO so that it can improve Green Consumer Behavior so that it supports sustainable development goals (SDGs), especially goal 6 (clean water and sanitation) and goal 11 (sustainable cities and

communities), improvements are needed in the user interface, website display, mini games display more interesting and updated quiz questions, and also feature updates according to real time and real stock. According to informants, the most popular feature is the educational feature. Updates to this feature can be done by adding videos about the dangers of waste, the latest videos about behavior that doesn't care about the dangers of waste, and the latest videos on efforts to overcome the waste problem. So far, education is still based on written information, it would be more effective if there were direct videos. Apart from the educational features, the feature that SIMPOSKO is interested in is the mini games feature. Updates to this feature can be done by updating quiz questions and adding games. For the recycled product catalog feature, it can be equipped with a video tutorial on using the product or a video of the product manufacturing process. It is hoped that this will increasingly attract users' interest in making purchases, not only because of necessity but because of psychological encouragement such as appreciating the struggle of waste bank administrators to process waste into products that have sales value and aesthetic value.

In future research, a survey can be conducted on all SIMPOSKO users to get more input regarding SIMPOSKO optimization to improve Green Consumer Behavior. Through input from all users, a better system can be developed according to user needs.

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