





Systematic study of the participation of environmental marketing, as a method to promote environmental awareness among university students

Estudio sistemático de la participación del marketing ambiental, como método para fomentar la conciencia ambiental de estudiantes universitarios

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ABSTRACT

Environmental pollution is one of the global challenges of this century since industrialization has created an excessive amount of polluting waste. Added to this is the frequently insufficient public awareness of environmental problems, which is why both lines are recognized in the system of sustainable development objectives. Given this reality and considering that university students are the future business, social, and educational leaders, adopting a preventive and proactive approach in their environmental education is necessary. In order to achieve a better understanding of the problem, we sought to evaluate the contribution of environmental marketing as a method to promote environmental awareness in university students, examine its theoretical advances and investigate the importance of environmental awareness in university students. A semi-systematic study of relevant articles was carried out through a critical literature review. The results indicate that environmental marketing is a method for environmental promotion among university students, which can reduce consumerism and encourage ecological awareness. It is concluded that environmental marketing generates positive transformations in students, generates changes in their vision of the world, and favors responsible environmental behavior.

Keywords: environment, environmental management, higher education, sustainable development.

JEL Classification: I23, Q01, Q56

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RESUMEN

La contaminación ambiental es uno de los desafíos globales de este siglo, ya que la industrialización ha creado una cantidad excesiva de residuos contaminantes. A ello se suma, con frecuencia, la insuficiente conciencia pública sobre los problemas medioambientales; de ahí que ambas líneas sean reconocidas en el sistema de objetivos del desarrollo sostenible. Ante esta realidad y en consideración a que los universitarios son los futuros líderes empresariales, sociales y educativos, es preciso adoptar un enfoque preventivo y proactivo en su educación ambiental. En vista de lograr una mejor comprensión de la problemática, se buscó evaluar el aporte del marketing ambiental como método para fomentar la conciencia ambiental en los universitarios, examinar sus avances teóricos e indagar la importancia de la conciencia ambiental en los universitarios. Se llevó a cabo un estudio semi-sistemático de artículos relevantes, a través de la revisión crítica de la literatura. Los resultados indican que el marketing ambiental es un método para la fomentación ambiental en los universitarios, que puede contribuir a disminuir el consumismo y alentar la conciencia ecológica. Se concluye que el marketing ambiental genera transformaciones positivas en los estudiantes, genera cambios en su visión del mundo y favorece un comportamiento ambiental responsable.

Palabras clave: desarrollo sostenible, educación superior, gestión ambiental, medio ambiente.

Clasificación JEL: I23, Q01, Q56

INTRODUCTION

Currently, environmental pollution is considered one of the main global problems of the century. In this regard, Ukaogo et al. (2020) mention that, in recent years, the progressive destruction of the environment threatens the lives of people and all living beings at the ecosystem level. Furthermore, the literature indicates that these environmental problems have increased in recent years, which is why they are considered one of the topics on future agendas. Within this framework of



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attention to the system of threats posed by environmental pollution, the effects on human health, irreparable damage to the environment and the ozone layer, and the vision of a future for new generations stand out. According to Ibarra (2020), as a result of environmental change, climate variability generates more frequent sudden catastrophes, the occurrence of natural phenomena, seasonal alterations, increased environmental deterioration, and substantial changes in the social and cultural life of communities.

Regarding this issue, the sustainable development agenda proposes a system of needs and processes to address. However, this research focuses on Goal 12, which addresses the waste associated with responsible production and consumption, especially in relation to changing population attitudes (Fonseca et al., 2020; Gutberlet, 2021; Ogunmakinde et al., 2022). One of the most recognizable and growing lines of action emerged from the idea that companies should generate initiatives aimed at offering environmentally friendly products and promoting environmental advertising. According to Urango De La Rosa (2019), digital marketing could be an important business resource for expanding these initiatives and reaching as many consumers as possible. This would be key to encouraging the use of goods and products that reduce pollution and developing environmental awareness among consumers. Furthermore, companies must contribute to the environment through recycling strategies, waste reduction, and the responsible use of natural resources (Saura et al., 2020; Sun et al., 2021).

One of the most serious problems in this regard is the pollution caused by the amount of plastic waste and/or debris that ends up directly in the ocean; this has caused damage to fauna and flora, leading to the emergence of “plastic islands,” and other problems that increasingly affect the marine ecosystem and the communities that depend on these natural resources (Mihai et al., 2022; Thushari & Senevirathna, 2020). Faced with these events, various organizations have introduced efficient alternatives to mitigate this impact, both in their production processes and in the presentation of the goods and services they offer, seeking better environmental and social integration (Martínez-Vázquez et al., 2021).

As a country, Colombia is no stranger to this reality, and this is because excess plastic waste affects areas close to the population, such as rivers, lakes, lagoons, and seas, disrupting their balance and functioning (Rocha et al., 2020). Therefore, this research seeks to establish the foundations for generating initiatives to cultivate environmental awareness and implement environmentally friendly actions. To achieve this, it is necessary to meet consumer needs in innovative ways because, as Bórquez Tepezano et al. (2020) affirm, environmental awareness and the demand for environmentally friendly products have grown in demand; this is also important at the market level.

Therefore, these strategies must be demonstrated by increasing recycling and choosing products and brands whose processes demonstrate respect for the environment. In this way, product design for responsible and ecological consumption would be promoted. Thus, the following research question was established: How can environmental marketing foster environmental awareness in higher education institutions?

In order to operationalize the question, the general objective is to evaluate the contribution of environmental marketing as a method to promote environmental awareness among university students. As for the specific objectives, these were aimed at examining the theoretical advances of environmental marketing and investigating the importance of environmental awareness among university students through a semi-systematic study of relevant articles by means of a critical review of the literature.

In this context, the progress of environmental marketing and environmental awareness in this age group was analyzed through a thorough literature review based on a compilation of research articles published in journals and theses published in repositories. Finally, an evolutionary approach was included to capture the main ideas related to the field of study. The main background studies consulted and the theoretical foundations that guided the subsequent analysis are presented below.

Analogous studies consulted

First, it is important to mention that companies must implement methods to capture this environmental awareness through affordable, eco-friendly products. From Hoyos's (2019) perspective, one of the main alternatives is the development of a retail market that increases the ability to meet consumer needs, allowing university students to make purchasing decisions within their purchasing capacity.

The background to this research included the study by Canchaya (2020) from the National University of Callao, which aimed to demonstrate students' environmental awareness and eco-friendly behaviors. The study found

consistency between the variables and behaviors through basic research and a quantitative approach. The study was used to implement, create, and incentivize policies to improve environmental awareness.

It was also found the research contribution of Mediavilla et al. (2020), or analytical report that evaluated environmental awareness, care, and respect for the environment. A descriptive, non-experimental design method was used, using a questionnaire survey of 532 students from the Faculty of Education at the University of Córdoba, Spain. The conclusion was that it is important to consider global issues, lower the level of abstraction, and establish emotional ties with the environment.

Another was the Guerra (2020) study, which investigated the relationship between responsible consumption and patterns oriented by social, ethical, and environmental dimensions. The research surveyed 328 university students and concluded that more responsible opinions appeared among women, although this is not always statistically consistent. In addition, this study showed that the consumption of sustainable products is related to ecological awareness, and this emphasizes the need to study the level of awareness of university students.

Likewise, among the research articles found, Naz et al. (2020) investigated customer factors or purposes for purchasing environmental products or goods. The authors conducted exploratory research surveying 1,185 students in Hungary. Among the main results, it was found that willingness to pay and green purchasing are the main factors, while intention is the factor that most affects students' environmental behavior.

Main theoretical postulates

Environmental marketing, as its name suggests, is a strategy or advertising for environmental products. However, this movement, or the term attributed to it, transcends the scope of traditional advertising, as it encompasses consumer awareness and environmental stewardship. Marketing is a developing discipline shaped by the need to contribute to mitigating environmental damage. The emergence of this field was linked to alternatives for preserving the environment and presented constructive trade as a solution for society (Salas-Canales, 2020). In this regard, Saleem et al. (2021) state that environmental marketing is also known for its inclination to transform different industries, not only through product presentation but also because it contributes to the design of ventures or product development.

Over time, organizations that have sought to contribute to society and the environment (some of them by creating foundations, encouraging recycling, or seeking other alternatives to reduce the impact of global warming) have gained greater recognition and value in the market. These results and growing consumer demand have mobilized companies to set goals that contribute to sustainability. Consequently, it has become necessary to measure the effectiveness of strategies, and the triple bottom line metric is one of the most widely used.

The triple bottom line, commonly used within the sustainability framework, is an indicator that seeks to measure the result of simultaneous management focus on the outcome of three dimensions (3Ps): profit (economic), people (social), and planet (environmental) (Tseng et al., 2020; Zaharia & Zaharia, 2021). Companies use strategies to fulfill a purpose and acquire market value, as the application of this approach promotes a commitment for companies to care as much about social and environmental aspects as about profits and involves organized clusters of variables (Budak, 2020). Among the latter, economic initiatives stand out, which are executed directly by the company for its benefit; Social initiatives, which are implemented or designed by the company for a specific population or society; such as environmental initiatives, proposed by the organization for the care or preservation of the environment (Kouaib et al., 2020).

Additionally, environmental marketing contains subunits or variables that reduce expansion and classify relevant information. Therefore, although elements such as price or promotion are analyzed, each organization adapts the strategy to its own dynamics (Kaur et al., 2022). Therefore, companies study these variables in detail to obtain concrete, concise, and verifiable results to determine and create applicable alternatives in organizations (Gelderman et al., 2021) (Kazibudzki and Trojanowski, 2020).

The four variables are important for this marketing mix and are necessary for formulating hypotheses or making decisions, thus capturing consumer attention. In this regard, four traditional variables that are part of the marketing mix (product, price, place, and promotion) are proposed, applied to environmental issues and seeking to capture the attention of consumers seeking to purchase environmentally friendly products (Salas-Canales, 2020) (Sharma, 2021). The use of marketing is fundamental to consumer awareness. From its inception, it is necessary to separate fiction from reality and to promote and verify that information about environmental and/or environmentally friendly products is 100% true.

The product variable complements environmental marketing, which involves physical and intangible characteristics. A group of intangible and tangible properties relates to those that relate to quality, color, label, brand, and appearance. Whether a good or service, the product must assess quality and meet the requirements of being environmentally friendly, organic, natural, and environmentally friendly (Marcon et al., 2022). The second variable of green marketing is price, which establishes a purchasing value for the product so that the consumer can acquire it. It involves taking into account the value of the product's creation and how much the customer or consumer is willing to pay for the service or product (Heydari et al., 2021; Troudi & Bouyoucef, 2020).

The third variable of environmental marketing is the place where the product is evaluated or studied, the extent to which it is intended to be taken, and goals or limits are established. In this regard, it must be taken into consideration that once the product reaches the customer for final consumption, the product's journey must be established, deciding whether it will be moved from wholesaler to retailer or whether it will be sold from store to store, or in supermarkets (Hanaysha et al., 2021). The fourth marketing variable is promotion, aimed at attracting consumers' attention by establishing promotions that are eye-catching in the consumer's eye. This involves using tools that, through studies by the company itself, seek to convince, attract attention, and communicate to the market and/or sales sector (Dinh et al., 2023).

METHODOLOGY

This research focuses on a semi-systematic and qualitative study, which included the stages of problem and objective formulation, the location and selection of relevant studies, a review of source content, and the extraction, interpretation, and analysis of results (Pollock et al., 2023). The first stage addressed the research questions and objectives, which helped establish the context, the problems analyzed, the study population, and the rationale for the analysis, emphasizing the evolution of ideas within the field (Omazic & Zunk, 2021).

In the second stage, the research aimed to establish criteria for selecting research on environmental marketing. Published theses and scientific articles published in indexed journals were considered. Additionally, studies focused on environmental marketing were considered to examine the impression and/or interventions with youth. Similarly, studies available in full text were included, but printed studies were excluded.

Subsequently, a review of the articles was conducted, with the aim of selecting those published in high-impact journals located in the Scopus and SciELO databases. According to Snyder (2019), the analysis of the articles should facilitate the production of criteria for new theoretical contributions to environmental marketing. Therefore, the study focused on the Scopus database, where the search began with the word "environmental marketing," which resulted in 4,274 articles. The keyword "marketing mix" was then added to the search filter, yielding 363 research articles; of these, only 93 were accessible. In addition to the previous filter, the completeness of the articles was taken into account, resulting in 71 articles.

Of these articles, 22 included definitions of "green marketing" in the title of the research, all in English. Of these articles, 7 contained author restrictions on viewing. Finally, the remaining 15 articles that included definitions of environmental marketing and its mix were analyzed. Only 3 articles met this requirement in the database. The search in the SciELO database began with the keyword "Green Marketing," resulting in 12 articles, 3 of which were in English, 1 in Spanish, and the remaining 6 in another language. Consequently, 11 articles were eligible for review, and 1 was discarded for not meeting this requirement. All 11 articles mentioned "Green Marketing" in their titles, so their content was analyzed in their entirety.

The search to select articles addressing the importance of environmental awareness in university students incorporated randomized controlled trials conducted in the field of environmental awareness to examine young people's thoughts. Likewise, analyses with extensive text were included, and those in inaccessible formats were rejected.

A search was conducted in the Scopus database for articles containing theoretical advances in environmental marketing, beginning with the first search filter using the words "green consciousness." This procedure yielded 954 articles, to which the second filter was added using the word "green marketing." A total of 273 studies were obtained; of these articles, 48 were accessible. The third filter, which required articles to contain the word "student," yielded 11 articles in English, with one article not accessible. Finally, the articles were analyzed to verify whether they met the definition of environmental marketing, and only two articles met the definition. The procedure was then replicated in the SciELO database using the keyword "green consciousness," yielding 10 research papers; 4 were

in English, 2 were in Spanish, and the remaining 4 were in another language. Of these articles, 11 were accessible, and 1 was unavailable. Finally, the content of 11 articles was analyzed, and only 1 that met the established criteria was selected.

RESULTS

Theoretical progress of environmental marketing

At the beginning, a table was made where the accepted and non-accepted filters for research in the study on environmental marketing and mix in the Scopus and/or SciELO databases are mentioned.

Table 1.

Inclusion and exclusion criteria for the systematic review of the theoretical progress of environmental or green marketing

Feature	Criteria	Inclusion	Exclusion
Publication Type	Modern scientific articles based on databases	X	
	Thesis	X	
	Articles	X	
Article Format	Books		X
	Electronic	X	
	Print		X
Publication Date	All dates	X	
Country of Publication	Any country	X	
Keywords	Environmental or green marketing	X	
	Marketing mix	X	
	Environmental product, environmental price, place or distribution, and promotion	X	
Location of Variables	Title	X	
	Abstract	X	

Source: own elaboration

Note: this table shows the applied inclusion and exclusion characteristics for the collection of information on theoretical progress.

Table 2.

Results obtained from the Scopus and Scielo databases

Item	Article	Item	Number of Scopus articles	Number of articles in Scielo	Words	
1	Semi-systematic review	First filter	Start with the search with the word “marketing green.”	4274	12	Ecological or green marketing, marketing mix, ecological product, ecological price, place or distribution and promotion.
2			The following inclusion is added: “marketing mix.”	363	12	
3			Article in English	353	3	
4			Article in Spanish	1	1	
5			Other languages	9	6	
6			Access available	93	11	
7		Second filter	Article in English	90	2	

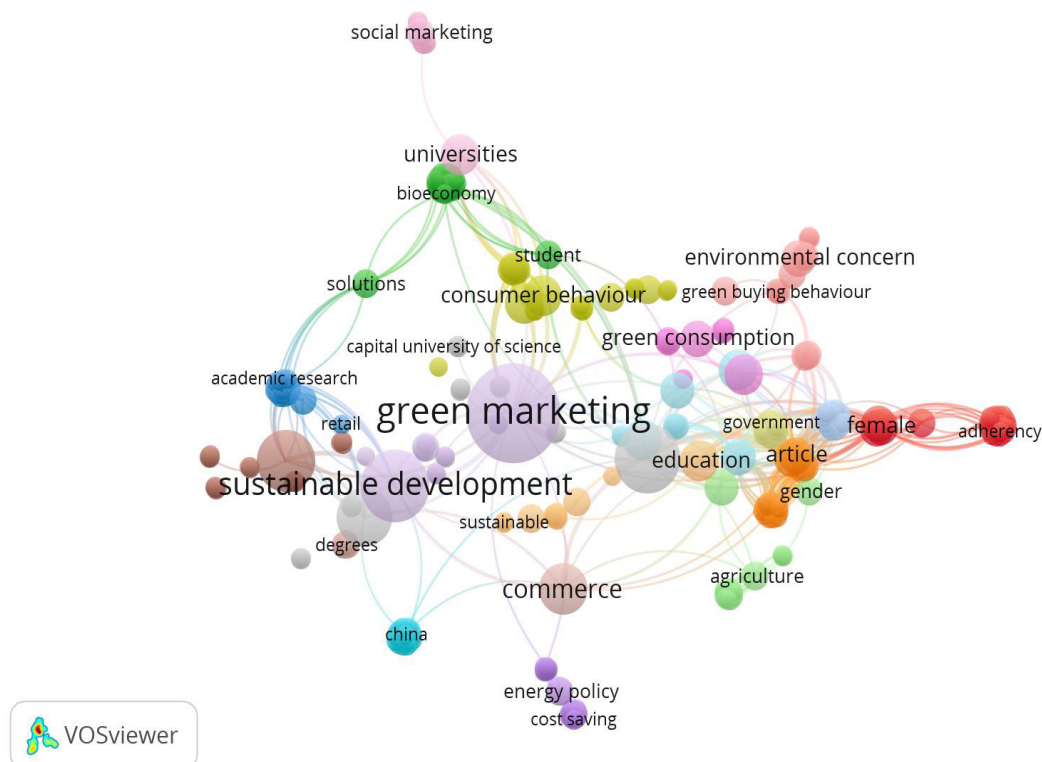
8		Article in Spanish	1	3
9		Article in another language	2	6
10	Document type	Full article	71	11
11		Scientific thesis or theory	0	0
12	Third filter or limitation	Includes the keyword “Green Marketing”	22	11
13		Article in English	22	2
14		Article in Spanish	0	3
15		Other language	0	6
16	Total	Based on item review.	22	11
17		Shortlisted	3	11
18		Not shortlisted due to author restrictions.	7	0
19		Not shortlisted	12	0

Source: own elaboration

Note: this table shows the filters applied for the collection of information on theoretical progress.

According to the table, the process for obtaining data from the Scopus and Scielo databases is shown; fourteen articles were selected to perform the semi-systematic review.

Figure 1.
General co-occurrence



Source: own elaboration

In the analysis of the results of the authors' research positions, it was observed that Souza (1993) mentioned that advertising uses environmental appeal as an emerging strategy and that this is one of the initial antecedents of the mix. According to Santos et al. (2013), Lopes and Pacagnan (2014), and Bur (2013), environmental marketing is a set of tools, strategies, and/or activities that seek to provide goods and/or services that meet consumer needs.

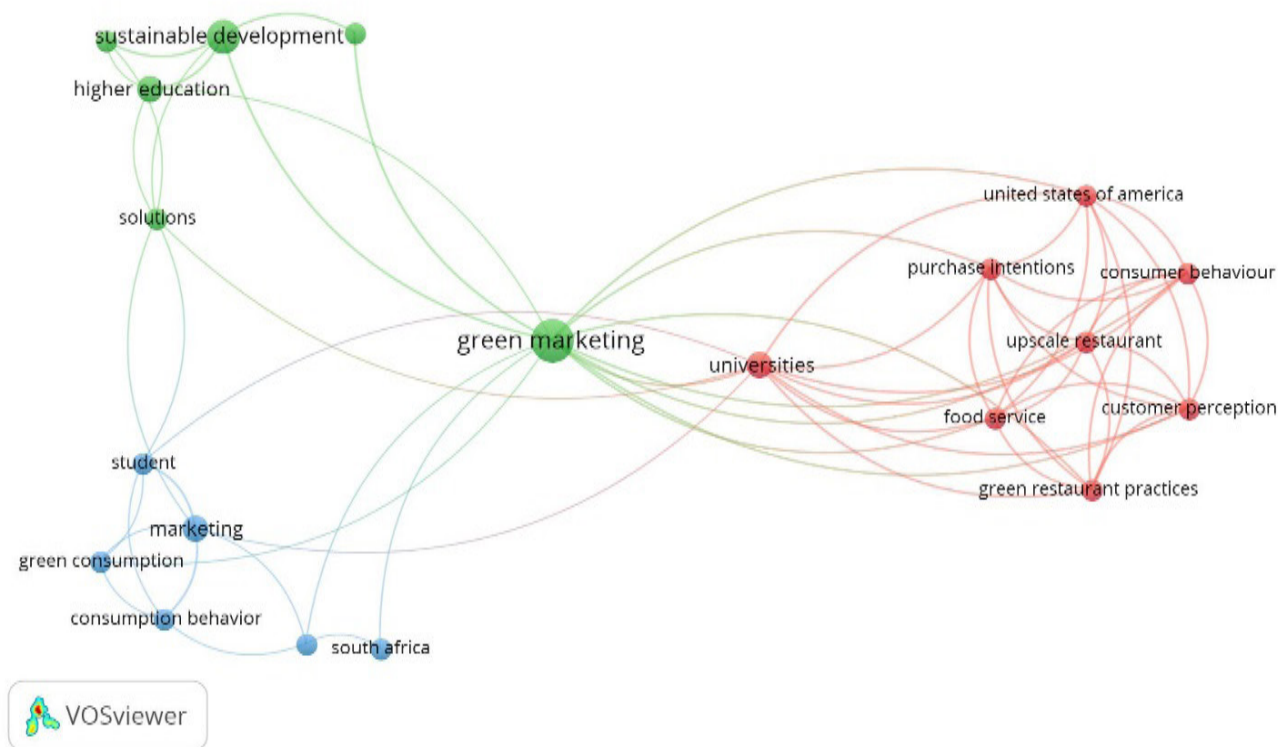
These authors broadly established the objectives of balancing society's consumption and creating environmental market opportunities.

In another vein, Arantes et al. (2014), Escobar-Moreno et al. (2015), and Alves et al. (2015) mention that environmental marketing is used as a tool to meet new consumer market demands and that it is a mechanism to implement product recycling and reuse. On the other hand, Chockalingam and Isreal (2016) and de Souza et al. (2016) mention that marketing makes a significant contribution to alleviating the impact that consumerism has on the environment and facilitating the consumption, production, distribution, promotion, and promotion of products in a sensitive and responsible manner. Finally, Caldas et al. (2021) mention that environmental marketing seeks to develop strategies to strengthen corporate image and connect environmental appeal with products and brands.

Keyword analysis revealed two distinct niches: one focused on general environmental marketing (Figure 1) and the other on environmental marketing specifically aimed at university students. Greater dispersion was observed in the former, while thematic niches predominated in the latter.

Figure 2.

Co-occurrence of keywords with the student identifier



Source: own elaboration

Table 3.

Theoretical evolution of environmental marketing

	Authors-Year	Definition	Search engine
Environmental or green marketing	Souza (1993)	Advertising using environmental appeal in advertising.	SCIELO
	Reinaldo (2008)	They state that green or environmental marketing consists of all activities aimed at generating and facilitating any change, with the goal of satisfying human desires or needs and with minimal detrimental impact on the environment.	SCIELO

Bur (2013)	They consider that the “Green” movement creates significant market opportunities for their companies, as evidenced by the increase in demand for goods and/or services.	SCIELO
Santos <i>et al.</i> (2013)	They state that organizations that choose to use green marketing must develop a set of strategies that seek to provide goods and/or services that not only meet consumer needs but also have little or no impact on the environment.	SCIELO
Lopes and Pacagnan (2014)	They assert that green marketing emerges as a strategic tool that aims to balance social consumption with minimal impact on the environment, creating ecologically sound products from production to disposal to meet the growing demand of environmentally conscious customers.	SCIELO
Arantes <i>et al.</i> (2014)	They assert that brands use environmental marketing, whether through electronic means (website) or through customer service, as a strategy. The user delivers the product to the collection point, where subcontracted third-party companies carry out the collection and recycling, followed by proper disposal of the product.	SCIELO
Escobar-Moreno <i>et al.</i> (2015)	They highlight certain aspects of this concept, such as the fact that manufacturers incorporate complex environmental components in this process, including recycling and reusing products.	SCIELO
Alves <i>et al.</i> (2015)	Green marketing is used as a tool to meet new consumer market demands. It involves predictions about the environment and aspirations for competitiveness as an advantage over competitors.	SCIELO
Esmaili and Fazeli (2015)	Green marketing, with growing criticism and action groups, focuses on people in their environment, limited resources, and their efficient use, according to the needs of future generations. From this perspective, it has gained greater awareness, and in this sense, the green consumption approach has become more popular among the population.	Scopus
Chockalingam and Isreal (2016)	Green marketing can make a significant contribution to alleviating the impact that consumerism has on the environment by promoting ecology.	Scopus
de Souza <i>et al.</i> (2016)	Green marketing to facilitate consumption, production, distribution, promotion, and marketing of products in a way that is sensitive or responsive to environmental issues.	SCIELO
Agustini (2019)	A wide range of activities range from modifying a product to be environmentally friendly, to modifying packaging, to creating and developing promotions that are consistent with the green dimension.	Scopus
Caldas <i>et al.</i> (2021)	Environmental marketing seeks to develop strategies to strengthen corporate image and connect environmental appeal with products and brands.	SCIELO

Source: own elaboration

Note: this table shows how the definition of Environmental Marketing evolved between 1993 and 2021.

According to the research selected from the database regarding “green marketing,” only a few sources contain the concept or mention the environmental marketing mix. Furthermore, there were only a few mentions of “environmental products,” which must meet consumer needs based on environmental sustainability. These elements are critical to environmental marketing, as they are the foundation of its commercial strategy.

Furthermore, it was found that the “environmental price” is the key budget factor for green purchasing. Regarding the “green market,” it was largely conceived as the product distribution point that allows the consumer to purchase it, as well as environmentally friendly transportation. Finally, the authors referred to “green promotion” as communication that promotes products and services to raise consumer awareness.

Table 4.
Concept of the marketing mix, according to several authors

	Autores-Año	Definición
Environmental product	Esmaili and Fazeli (2015)	The green product is one of the most important elements in marketing. It has an environmental product design that tends to reduce pollution.
	Chockalingam and Isreal (2016)	The term “green product” used throughout this research article refers to a product that has few chemicals (below 0.1% of total ingredients) compared to normal, chemical-based products.
	Agustini <i>et al.</i> (2019)	The friendly product must not only be able to satisfy consumer needs, but at the same time must support environmental sustainability
Environmental price	Esmaili and Fazeli (2015)	Product pricing pays attention to greenness, as the effectiveness of purchasing a budget factor in green purchasing is the second priority. However, due to income and economic pressures on families, price is a key element in people’s green purchasing.
	Chockalingam and Isreal (2016)	Consumers are happy to pay a higher price for high-quality, environmentally friendly products.
	Agustini <i>et al.</i> (2019)	It is stated that it is a fixed price for a product that includes environmental considerations.
Square or ecological distribution	Esmaili and Fazeli (2015)	It is mentioned that green distribution has two aspects: internally, in addition to environmental compliance issues within companies, there are other processes. Managers and employees must feel secure, while externally, locations that cause the least harm to the environment must be selected.
	Chockalingam and Isreal (2016)	It is mentioned that in a place or market where goods are purchased, it has become fashionable to buy items that are “environmentally friendly.”
	Agustini <i>et al.</i> (2019)	It is mentioned that green distribution is about placing products in front of the right consumers, that is, those who are environmentally conscious.
Environmental promotion	Esmailiandy Fazeli (2015)	It is mentioned that promotion increases consumer awareness of environmental issues.
	Chockalingam and Isreal (2016)	Green promotion is also referred to as communication that promotes products and services. In addition to promoting a green advertising campaign, it must also have the necessary characteristics to enhance the corporate image of social responsibility.
	Agustini <i>et al.</i> (2019)	It is mentioned that green promotion consists of promoting an environmentally friendly product, aimed at educating and changing buyers’ opinions about the product

Source: own elaboration

Note: this table shows how the definition of the Environmental Marketing Mix evolves

Relevance of environmental awareness in university students

The following table represents the inclusion and exclusion criteria for conducting a semi-systematic review of the relevance of environmental awareness in university students according to the Scopus and SciELO databases.

Table 5.
Inclusion and exclusion criteria of ecological awareness

Feature	Criteria	Inclusion	Exclusion
Type of publication	Modern scientific articles based on databases	X	
	Thesis	X	
	Articles	X	
Article format	Books		X
	Electronic	X	
	Print		X
Date of publications	All dates	X	
Country of publication	Any country	X	
Keywords	Eco-consciousness	X	
	Environmental or green marketing	X	
Study population	University students	X	
Location of variables	Title	X	
	Abstract	X	

Source: own elaboration

Note: this table shows the inclusion and exclusion criteria for conducting a semi-systematic review of the relevance of environmental awareness in university students.

According to the results obtained, three articles were selected that showed, evaluated and analyzed the environmental awareness of young university students.

According to the results obtained in the articles that studied a population of university students, the age limits for the research ranged from approximately 18 to 24 years old. Regarding the techniques, all the selected studies used the survey or questionnaire method for university students. In the research by Gurbuz and Ozkan (2019), it was found that young people possess “environmental intelligence” but show low levels of environmental behavior. In the research by Yusliza et al. (2020), a survey of a population of 72 university students was used as a method to collect data, which resulted in the young people demonstrating commitment to environmental awareness and pro-environmental behaviors predominating in their daily lives. Finally, in the research by Amérigo et al. (2017), a survey was used with a population of 250 students, and the result was that young people link conservation with human well-being and the perception of connection with nature.

Table 6.
Scopus and Scielo results on ecological awareness

Item	Article	item	Number of articles in Scopus	Number of articles in Scielo	Words
1	First filter	Initially, the search is done with the word “green consciousness”	954	10	Green marketing, green consciousnesses, student.
2		The following inclusion is added: “green marketing”	273	10	
3		Article in English	269	4	
4		Article in Spanish language	1	2	
5		Other languages	3	4	
6		Open access	48	10	
7	Second Filter	Article in English	47	4	
8		Article in Spanish language	1	2	
9		Article in another language	0	4	
10	Document type	Full article	45	10	
11		Thesis or scientific theory	0		

12	Third filter or limitation	Type of population: "Student"	11	10
13		Article in English	11	4
14		Article in Spanish language	0	2
		Article in another language	0	4
15	Total	According to item review-	11	10
16		Shortlisted	2	1
17		Not shortlisted due to author restrictions	1	0
18		Not shortlisted	8	9

Source: own elaboration

Note: this table shows the filters that were applied to the articles that showed, evaluated and analyzed the environmental awareness of young university students.

Table 7.
Environmental awareness in university students

Authors - Year	Method	Population	Age Range	Result	Search engine
Amérigo <i>et al.</i> (2017)	A self-administered questionnaire on environmental attitudes and behaviors.	250 Brazilian university students from the city of Sao Paulo	The average age of the participants was 23.96 years (SD = 5.75)	A holistic perspective on these relationships in the sample of Brazilian university students. For the group studied, environmental conservation to improve human well-being, the perception of connection with nature, and feelings of emotional affinity with nature appear to be linked in the same way.	SciELO
Gurruz and Ozkan (2019)	The survey consisted of 32 questions.	648 students at Bursa Uludag University, Türkiye.	18 and 24 in 4-year colleges, the Medical School varies between 18-26, 18-21 in vocational schools and 18-26 in art school.	The results show that students have environmental knowledge, therefore, they show lower levels of environmental attitude and do not exercise very favorable behavior.	Scopus
Yusliza <i>et al.</i> (2020)	Survey or questionnaire	72 students	72% were between 16 and 19 years old, 25% were between 20 and 23 years old, and the remaining 2.78% were over 24 years old.	The results showed that environmental commitment, environmental awareness, environmental lifestyle, and ecological self-efficacy positively influenced pro-environmental behavior, thus providing new insights into the existing literature on environmental sustainability.	Scopus

Source: own elaboration

Note: this table shows the filters that were applied to the articles that showed, evaluated and analyzed the environmental awareness of young university students.

Study of the participation of environmental marketing as a method to promote environmental awareness among university students

Similarly, the study of the use of environmental marketing as a method to promote environmental awareness showed that this type of advertising is used as a means to attract and influence consumer purchasing decisions. Among the most frequent factors were preference, brand love, interest, and the trust generated by green advertising. According to the analysis, a closer relationship with the customer is developed, a change in perspective is generated, and an environmentally friendly lifestyle is encouraged.

Table 8.
Study of the participation of environmental marketing as a method to promote environmental awareness in universities

Author- Year	Definition
Alves et al. (2015)	Environmental marketing as a shift in perspective and a way of doing business, requires environmental responsibility and commitment, as well as a global organization. It influences strategic decisions to promote not only the product name but also provides the company with proactivity and respect for the consumer.
Esmaili and Fazeli (2015)	Green marketing, budget and preferred brand are the main elements that influence people’s purchasing decisions.
de Souza et al. (2016)	Green marketing as a means to develop closer relationships with your customers.
Chockalingam and Isreal (2016)	Green marketing can make a significant contribution to alleviating the impact that consumerism has on the environment by promoting eco-friendly, eco-friendly variants of regular products.
Agustini et al. (2019)	Being environmental can be used as a marketing strategy to tap into the market and expand the consumer base.
Caldas et al. (2021)	In marketing, there are allusions that can be perceived as greenwashing, including: “preference for environmental products,” “interest in ecological information,” “trust associated with the brand,” “green purchase incentive advertising,” etc.

Source: own elaboration

Note: this table shows the articles that sought strategies to promote environmental awareness.

CONCLUSIONS

According to the research analyzed, it is observed that marketing has evolved to include current and future societies within the context of green advertising. Among the main challenges are the need to implement green production, facilitate the promotion and awareness of the use of resources to preserve the environment, and strengthen the company’s image. This involves including the environmental product and its brand as a tool that helps and generates environmental awareness. Although the results were mixed, it can be stated that this multidimensional approach demonstrates that its primary purpose is not to generate money; rather, it seeks to encourage the consumption of environmentally friendly products, educate consumers about alternatives that minimize pollution, and differentiate the offering from traditional, highly polluting products.

Regarding the relationship between environmental marketing and environmental awareness, studies show that they complement and support each other from the perspective of environmental marketing development; this is because the sources emphasize generating environmental awareness through the advertising of the environmental products they promote. Regarding the study population, university students must acquire knowledge and prepare themselves in their respective professions to face the challenges related to the conservation of the natural environment. Therefore, environmental marketing not only focuses on environmental aspects but can also be included in programs or learning experiences that promote the adoption of sustainable strategies. Therefore, university students must be trained to understand and master these strategies so that they can contribute to the organizations they work for in the future.

REFERENCES

- Agustini, D., Athanasius, S., y Retnawati, B. (2019). Identification of green marketing strategies: Perspective of a developing country. *Identification of green marketing strategies: perspective of a developing country*, 15(4), 42–56. [http://dx.doi.org/10.21511/im.15\(4\).2019.04](http://dx.doi.org/10.21511/im.15(4).2019.04)
- Alves, A., de São Pedro, F., Vasconcelos, J., ... y Imam, A. (2015). Inovando a Organização pela estratégia de Marketing Verde. *Revista Internacional de Investigación en Ciencias Sociales*, 11(2), 165–178. <https://doi.org/10.18004/riics.2015.diciembre.165-178>
- Amérigo, M., García, J., y Côrtes, P. (2017). ANALYSIS OF ENVIRONMENTAL ATTITUDES AND BEHAVIORS: AN EXPLORATORY STUDY WITH A SAMPLE OF BRAZILIAN UNIVERSITY STUDENTS. *Ambiente & Sociedade*, 20(3), 1–20. <https://doi.org/10.1590/1809-4422asoc300r1v2032017>
- Arantes, A., Jabbour, A., y Jabbour, C. (2014). Adoção de práticas de Green Supply Chain Management: Mecanismos de indução e a importância das empresas focais. *Production*, 24(4), 725–734. <https://doi.org/10.1590/S0103-65132014005000007>
- Bórquez, B., González, M., y Muñoz, G. (2020). Análisis sobre la percepción de la calidad y la relación con el desempeño del capital humano. *Ad-gnosis*, 9(9), 11–19. <https://doi.org/10.21803/adgnosis.9.9.433>
- Budak, A. (2020). Sustainable reverse logistics optimization with triple bottom line approach: An integration of disassembly line balancing. *Journal of Cleaner Production*, 270, 122475. <https://doi.org/10.1016/j.jclepro.2020.122475>
- Bur, A. (2013). Marketing sustentable: Utilización del marketing sustentable en la industria textil y de la indumentaria. *Cuadernos del Centro de Estudios en Diseño y Comunicación. Ensayos*, 45, 133–142.
- Caldas, M., Veiga-Neto, A., Guimarães, L., Castro, A., y Pereira, G. (2021). Greenwashing in environmental marketing strategy in the brazilian furniture market. *Revista de Economia e Sociologia Rural*, 59(3), e225336. <https://doi.org/10.1590/1806-9479.2021.225336>
- Canchaya, A. M. (2020). Conciencia ambiental y comportamientos ecológicos en los estudiantes de una universidad de Lima-2020.
- Chockalingam, S., y Isreal, D. (2016). Redesigning the marketing mix for eco-friendly product consumption among non-purchasers in India. *Management & Marketing*, 11(1), 355–370.
- de Souza, E. R., Giro, R., y Caldeira, A. (2016). GREEN MARKETING AS A MEDIATOR BETWEEN SUPPLY CHAIN MANAGEMENT AND ORGANIZATIONAL PERFORMANCE. *RAM. Revista de Administração Mackenzie*, 17(3), 183–211. <https://doi.org/10.1590/1678-69712016/administracao.v17n3p183-211>
- Dinh, K., Nguyen-Viet, B., y Phuong, H. (2023). Toward Sustainable Development and Consumption: The Role of the Green Promotion Mix in Driving Green Brand Equity and Green Purchase Intention. *Journal of Promotion Management*, 29(6), 824–848. <https://doi.org/10.1080/10496491.2023.2165209>
- Escobar-Moreno, N., Gil, A., y Restrepo, A. (2015). Caracterización preliminar del consumidor verde antioqueño: El caso de los consumidores del Valle de Aburrá. *Revista EAN*, 78, 92–107.
- Esmaili, M., y Fazeli, S. (2015). Surveying of Importance of Green Marketing Compared Purchase Budget and Preferred Brand when Buying by AHP Method. *Mediterranean Journal of Social Sciences*. <https://doi.org/10.5901/mjss.2015.v6n4p388>
- Fonseca, L., Domingues, J., y Dima, A. (2020). Mapping the Sustainable Development Goals Relationships. *Sustainability*, 12(8), 3359. <https://doi.org/10.3390/su12083359>
- Gelderman, C., Schijns, J., Lambrechts, W., y Vijgen, S. (2021). Green marketing as an environmental practice: The impact on green satisfaction and green loyalty in a business-to-business context. *Business Strategy and the Environment*, 30(4), 2061–2076. <https://doi.org/10.1002/bse.2732>

- Guerra, P. (2020). Pautas de consumo responsable entre estudiantes universitarios de la generación millennials del Uruguay. *Otra Economía*, 13(23), 192–208.
- Gurbuz, I., y Ozkan, G. (2019). WHAT'S GOING ON AT THE UNIVERSITIES? HOW MUCH HAS THE RESEARCH REVEALED UNIVERSITY STUDENTS' ATTITUDES TOWARDS THE ENVIRONMENT? A CASE STUDY OF BURSA, TURKEY. *Applied Ecology and Environmental Research*, 17(2), 5109–5138. https://doi.org/10.15666/aeer/1702_51095138
- Gutberlet, J. (2021). Grassroots waste picker organizations addressing the UN sustainable development goals. *World Development*, 138, 105195. <https://doi.org/10.1016/j.worlddev.2020.105195>
- Hanaysha, J., Al Shaikh, M., y Alzoubi, H. (2021). Importance of Marketing Mix Elements in Determining Consumer Purchase Decision in the Retail Market: *International Journal of Service Science, Management, Engineering, and Technology*, 12(6), 56–72. <https://doi.org/10.4018/IJSSMET.2021110104>
- Heydari, J., Govindan, K., y Basiri, Z. (2021). Balancing price and green quality in presence of consumer environmental awareness: A green supply chain coordination approach. *International Journal of Production Research*, 59(7), 1957–1975. <https://doi.org/10.1080/00207543.2020.1771457>
- Hoyos, S. (2019). La influencia de los discounter en el cambio de hábitos de consumo de los colombianos. *Ad-gnosis*, 8(8), 91–98. <https://doi.org/10.21803/adgnosis.v8i8.366>
- Ibarra, R. (2020). Indeterminación del estatus jurídico del migrante por cambio climático. *Anuario Mexicano de Derecho Internacional*, 1(20), 135. <https://doi.org/10.22201/ij.24487872e.2020.20.14473>
- Kaur, B., Gangwar, V., y Dash, G. (2022). Green Marketing Strategies, Environmental Attitude, and Green Buying Intention: A Multi-Group Analysis in an Emerging Economy Context. *Sustainability*, 14(10), 6107. <https://doi.org/10.3390/su14106107>
- Kazibudzuki, P., y Trojanowski, T (2020). Examination of marketing mix performance in relation to sustainable development of the Poland's confectionery industry. *PLOS ONE*, 15(10), e0240893. <https://doi.org/10.1371/journal.pone.0240893>
- Kouaib, A., Mhiri, S., y Jarboui, A. (2020). Board of directors' effectiveness and sustainable performance: The triple bottom line. *The Journal of High Technology Management Research*, 31(2), 100390. <https://doi.org/10.1016/j.hitech.2020.100390>
- Lopes, V., y Pacagnan, M. (2014). Marketing verde e práticas socioambientais nas indústrias do Paraná. *Revista de Administração*, 49(1), 116–128. <https://doi.org/10.5700/rausp1135>
- Marcon, A., Ribeiro, J., Dangelico, R., de Medeiros, J., y Marcon, É. (2022). Exploring green product attributes and their effect on consumer behaviour: A systematic review. *Sustainable Production and Consumption*, 32, 76–91. <https://doi.org/10.1016/j.spc.2022.04.012>
- Martínez-Vázquez, R., Milán-García, J., y de Pablo Valenciano, J. (2021). Challenges of the Blue Economy: Evidence and research trends. *Environmental Sciences Europe*, 33(1), 61. <https://doi.org/10.1186/s12302-021-00502-1>
- Mediavilla, M., Medina, S., y González, I. (2020). Diagnóstico de sensibilidad medioambiental en estudiantes universitarios. *Educación y Educadores*, 23(2), 179–197. <https://doi.org/10.5294/edu.2020.23.2.2>
- Mihai, F.-C., Gündoğdu, S., Khan, F., ... y van Emmerik, T. (2022). Plastic pollution in marine and freshwater environments: Abundance, sources, and mitigation. En *Emerging Contaminants in the Environment* (pp. 241–274). Elsevier. <https://doi.org/10.1016/B978-0-323-85160-2.00016-0>
- Naz, F., Oláh, J., Vasile, D., y Magda, R. (2020). Green Purchase Behavior of University Students in Hungary: An Empirical Study. *Sustainability*, 12(23), 10077. <https://doi.org/10.3390/su122310077>

- Ogunmakinde, O., Egbelakin, T., y Sher, W. (2022). Contributions of the circular economy to the UN sustainable development goals through sustainable construction. *Resources, Conservation and Recycling*, 178, 106023. <https://doi.org/10.1016/j.resconrec.2021.106023>
- Omazic, A., y Zunk, B. (2021). Semi-Systematic Literature Review on Sustainability and Sustainable Development in Higher Education Institutions. *Sustainability*, 13(14), 7683. <https://doi.org/10.3390/su13147683>
- Pollock, D., Peters, M., Khalil, H., ... y Munn, Z. (2023). Recommendations for the extraction, analysis, and presentation of results in scoping reviews. *JBIE Evidence Synthesis*, 21(3), 520–532. <https://doi.org/10.11124/JBIES-22-00123>
- Reinaldo, D. (2008). Marketing ecológico y turismo. *Estudios y perspectivas en turismo*, 17(2), 76–91.
- Rocha, D., Pérez, C., y Villanueva, J. (2020). Material ecológico para construcción en vidrio, arena y poliplásticos (VAPoli). *Ciencia e Ingeniería Neogranadina*, 30(2), 49–66. <https://doi.org/10.18359/rcin.4643>
- Salas-Canales, H. (2020). Publicidad ecológica: Direccionando el comportamiento del consumidor del siglo XXI. *Fides et Ratio-Revista de Difusión cultural y científica de la Universidad La Salle en Bolivia*, 19(19), 231–246.
- Saleem, F., Khattak, A., Ur Rehman, S., y Ashiq, M. (2021). Bibliometric Analysis of Green Marketing Research from 1977 to 2020. *Publications*, 9(1), 1. <https://doi.org/10.3390/publications9010001>
- Santos, S., Sousa, C., Sampaio, D., y Fagundes, A. (2013). A influência da utilização das sacolas compostáveis no comportamento do consumidor de Belo Horizonte. *Ambiente & Sociedade*, 16(4), 1–18. <https://doi.org/10.1590/S1414-753X2013000400002>
- Saura, J., Palos-Sanchez, P., y Rodríguez Herráez, B. (2020). Digital Marketing for Sustainable Growth: Business Models and Online Campaigns Using Sustainable Strategies. *Sustainability*, 12(3), 1003. <https://doi.org/10.3390/su12031003>
- Sharma, A. (2021). Consumers' purchase behaviour and green marketing: A synthesis, review and agenda. *International Journal of Consumer Studies*, 45(6), 1217–1238. <https://doi.org/10.1111/ijcs.12722>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Souza, M. (1993). Rumo à prática empresarial sustentável. *Revista de Administração de Empresas*, 33(4), 40–52. <https://doi.org/10.1590/S0034-75901993000400005>
- Sun, Y., Luo, B., Wang, S., y Fang, W. (2021). What you see is meaningful: Does green advertising change the intentions of consumers to purchase eco-labeled products? *Business Strategy and the Environment*, 30(1), 694–704. <https://doi.org/10.1002/bse.2648>
- Thushari, G., y Senevirathna, J. (2020). Plastic pollution in the marine environment. *Heliyon*, 6(8), e04709. <https://doi.org/10.1016/j.heliyon.2020.e04709>
- Troudi, H., y Bouyoucef, D. (2020). Predicting purchasing behavior of green food in Algerian context. *EuroMed Journal of Business*, 15(1), 1–21. <https://doi.org/10.1108/EMJB-03-2019-0046>
- Tseng, M.-L., Chang, C.-H., Lin, C.-W., ... y Xue, B. (2020). Future trends and guidance for the triple bottom line and sustainability: A data driven bibliometric analysis. *Environmental Science and Pollution Research*, 27(27), 33543–33567. <https://doi.org/10.1007/s11356-020-09284-0>
- Ukaogo, P., Ewuzie, U., y Onwuka, C. (2020). Environmental pollution: Causes, effects, and the remedies. En *Microorganisms for Sustainable Environment and Health* (pp. 419–429). Elsevier. <https://doi.org/10.1016/B978-0-12-819001-2.00021-8>
- Urango de la Rosa, Y. (2019). Marketing digital como recurso táctico para las microempresas. *Ad-gnosis*, 8(8), 156–169. <https://doi.org/10.21803/adgnosis.v8i8.372>

Systematic study of the participation of environmental marketing, as a method to promote environmental awareness among university students

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Zaharia, R., y Zaharia, R. (2021). Triple Bottom Line. *The Palgrave Handbook of Corporate Social Responsibility* (pp. 75–101). Springer International Publishing. https://doi.org/10.1007/978-3-030-42465-7_2

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